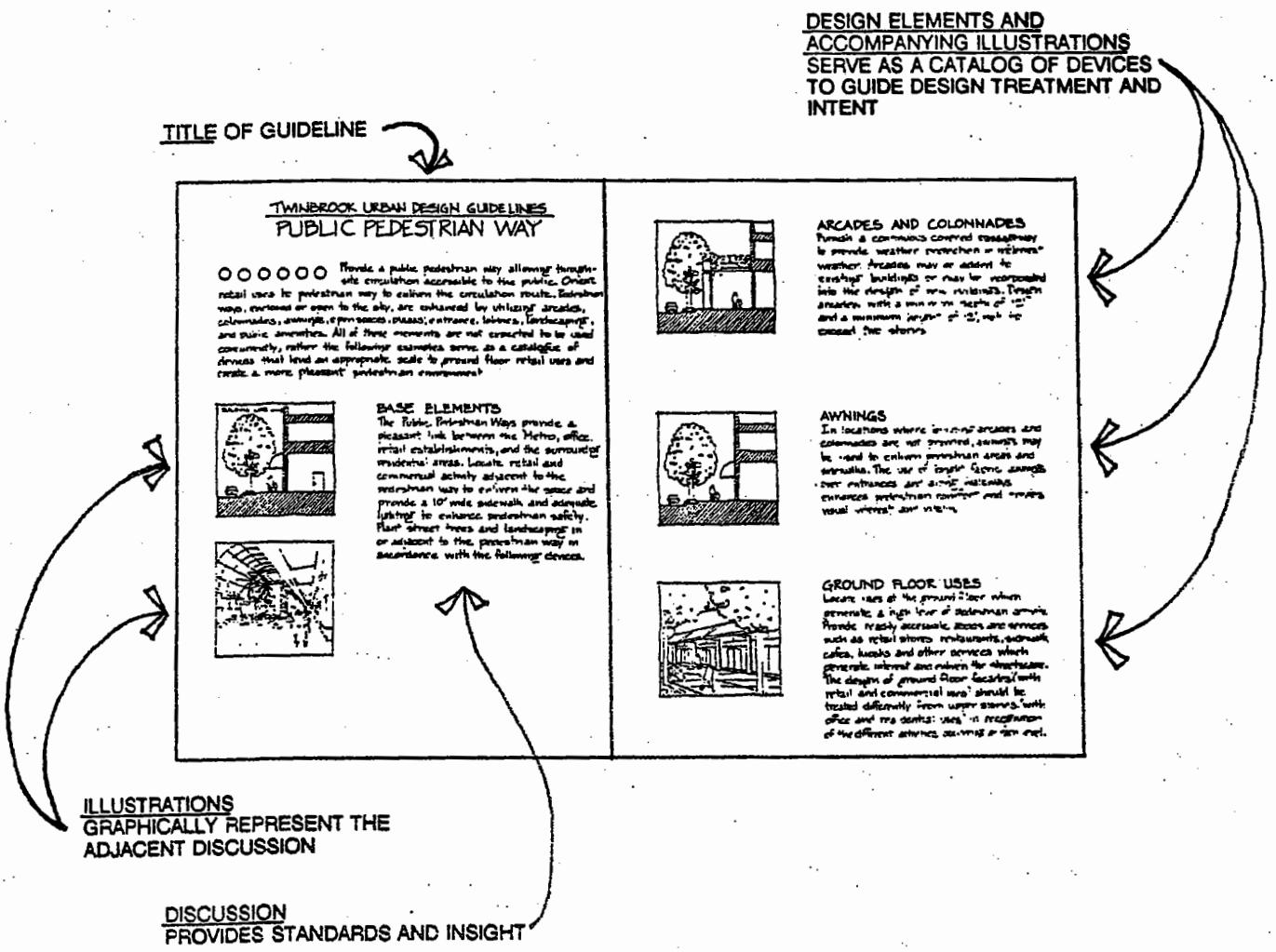
ATTACHMENT 8

Urban Design Guidelines

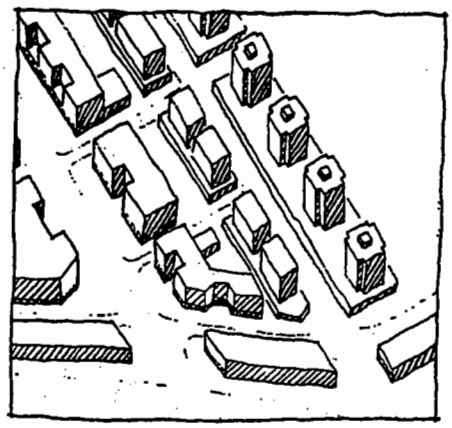
The Urban Design Guidelines are intended to provide a framework which will ensure the quality of the built environment in the Rockville Pike Corridor. They serve as a general guide to developers and architects preparing for design review by illustrating the City's objectives. The guidelines highlight and supplement certain requirements set forth in the Zoning Ordinance in order to visually define the intent of the regulations and to give a number of suggestions for ways to achieve the desired outcome (see pages 63 to 80) Several ordering devices have been used to provide clarity and continuity:



RPC URBAN DESIGN GUIDELINES

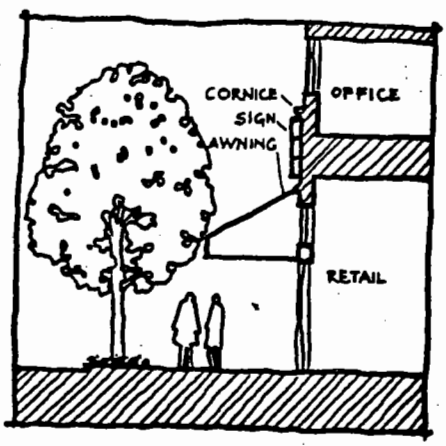
ROCKVILLE PIKE BUILD TO LINE

Place at least 50% of the Rockville Pike facade 135' from the center-line of Rockville Pike to provide a consistent visual image. Orient retail and services to the street and provide amenities that promote pedestrian activity.



BUILD TO LINE

A continuous building line creates a consistent street edge and provides a positive visual image to pedestrians and motorists. In order to achieve the desired sense of scale and space, it is most important to maintain this continuous edge at the lower floors of buildings where pedestrians and motorists are located. The shape of streets is improved and pedestrian comfort is enhanced by maintaining a uniform building line at the first two floors although well-defined open spaces may punctuate the facade to add interest and scale.



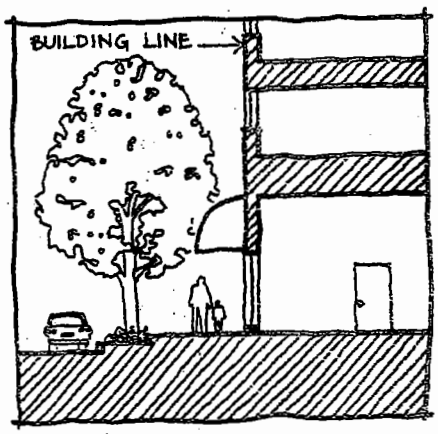
FACADE TREATMENT

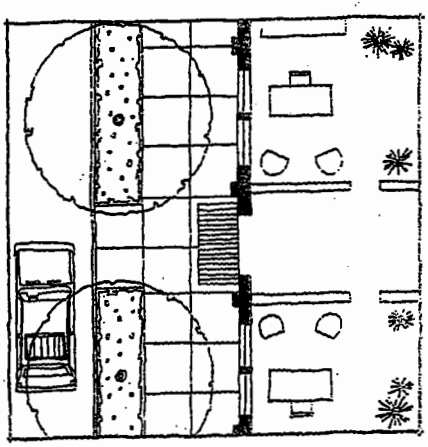
The design of ground floor facades should recognize the different activities occurring at each level. The upper level with office and residential uses should complement the pedestrian level with its retail and commercial uses. Signs, special features, entrances, and service and parking access can be more easily integrated with the facade when the pedestrian level treatment recognizes the functional differences of the upper levels. This recognition can be achieved with cornices, changes of materials and other devices that allow changes to occur at grade without affecting upper facades.

RPC URBAN DESIGN GUIDELINES

BUILDING LINE AT SECONDART STREETS

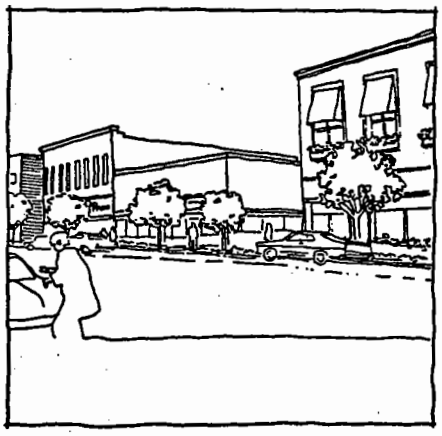
Place the lower floors of buildings at the building line or alternate building line and orient retail uses and services to the street. Create interest at the pedestrian level with landscaped setbacks, public amenities, awnings, plazas and other devices. Where the building line is not coincident with the Right-of-Way line the building line shall accomodate the streetscape standards.





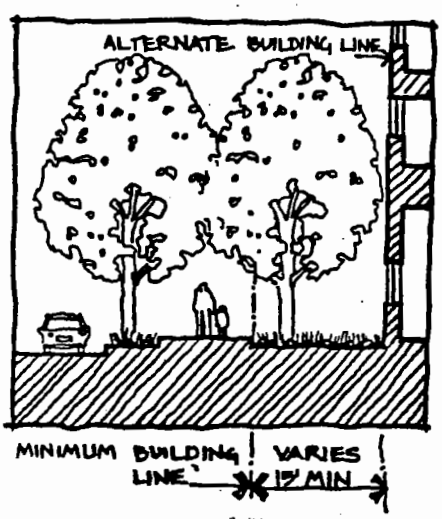
STREETSCAPE STANDARDS

The pedestrian environment should be made safe, convenient and attractive along secondary streets. To achieve this, the standard streetscape features a 5' wide tree planting strip along the roadway and a 10' wide sidewalk at the building edge. Street trees shall be planted approximately 30' o.c. and not more than 40' apart. Trees shall be selected from the list of "Acceptable Trees for Street Planting in the City of Rockville, MD" and at the time of planting shall be a minimum of 3.5" in caliper and 15' high.



MINIMUM BUILDING LINE

Maintain visual continuity of the streetscape by placing the building edge at an established building line. Secondary and minor streets may have significant pedestrian traffic even though there may be few shops or restaurants located along them. Pedestrian comfort should therefore remain as a prime design consideration.



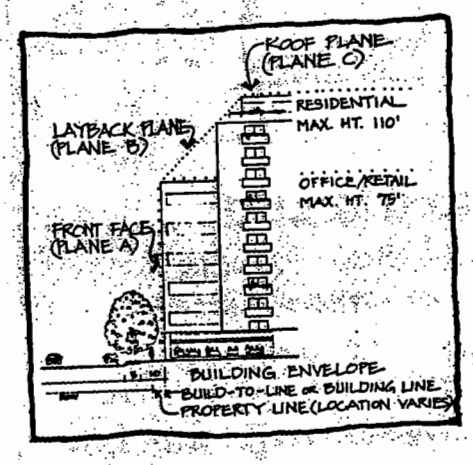
ALTERNATE BUILDING LINE

If greater setbacks from the standard streetscape is desired or proposed then it shall be a minimum of 15' and include an additional row of trees on the building side of the sidewalk. The alternate building line may be interrupted to create plazas, open spaces and courtyards. The pedestrian environment can be enhanced by locating parking behind the building and by providing safe and attractive through circulation for pedestrians.

RPC URBAN DESIGN GUIDELINES

BUILDING ENVELOPE

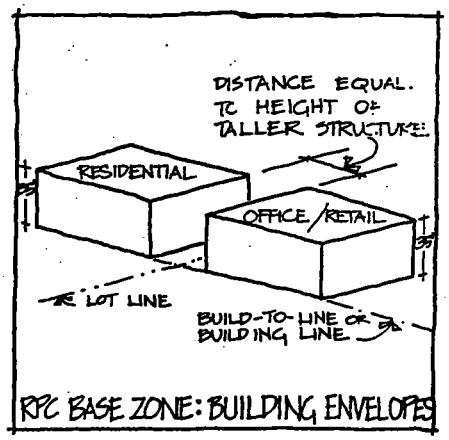
Building envelopes define the vertical and horizontal boundaries of buildable area on individual sites. Consistent relationships between the street and new buildings result from the application of the building envelopes. They ensure that new developments are compatible with surrounding neighborhoods by providing adequate light and air for nearby structures and adjacent streets. Parcel by parcel building envelopes are indicated in the Functional Plans and Sections. Characteristic elements are embodied in the accompanying illustrations and descriptions.



DESCRIPTION

Building Envelope is defined by a combination of the following restrictions:

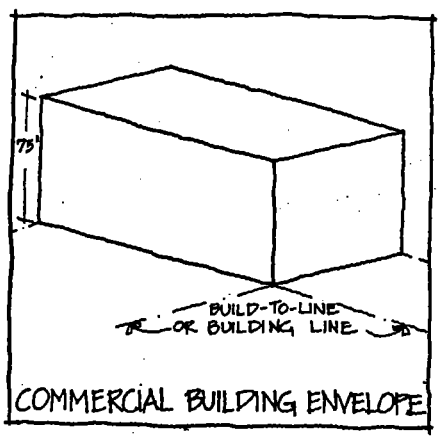
- height of the building
- layback plane
- distance between building and lot lines (setbacks)
- distance between building and street (build to/ building line)
- distance between adjacent buildings
- solar access requirements
- maximum F.A.R.
- residential density
- permitted uses
- required open space on the lot



RPC BASE ZONE: BUILDING ENVELOPES

RPC BASE ZONE

Commercial and residential building envelopes are limited in height to 35'. No setbacks from the side or rear lot lines are required unless residential land abuts the adjacent lot. In that case, the setback must equal the building height of the taller structure.



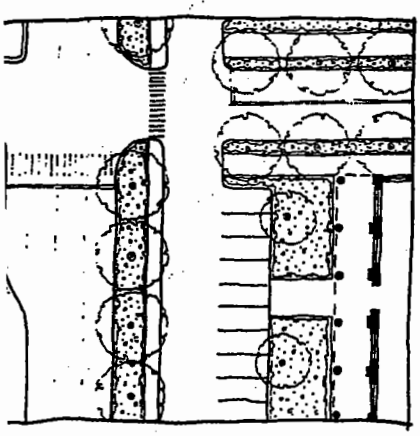
COMMERCIAL BUILDING ENVELOPE

RPC OPTIONAL METHOD: TWINBROOK METRO AREA

Commercial and residential building envelopes shall be limited in height to 75'. No setbacks from the side or rear lot lines are required unless residential land abuts the adjacent lot. In that case, the setback must equal the building height of the taller structure.

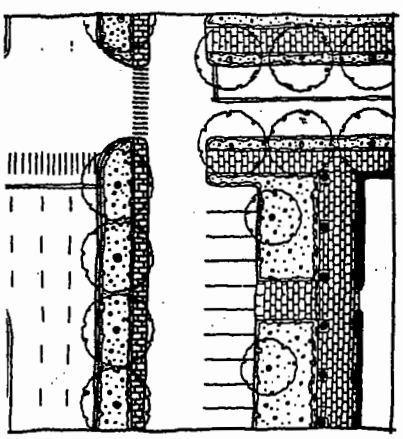
ROCKVILLE PIKE STREETSCAPE

Provide a consistent visual image along Rockville Pike. A pleasant pedestrian environment can be achieved by lining the street level with arcades and retail stores that adjoin the sidewalk and by following the Streetscape Requirements, City of Rockville Sign Ordinance, and Access Management Plan.



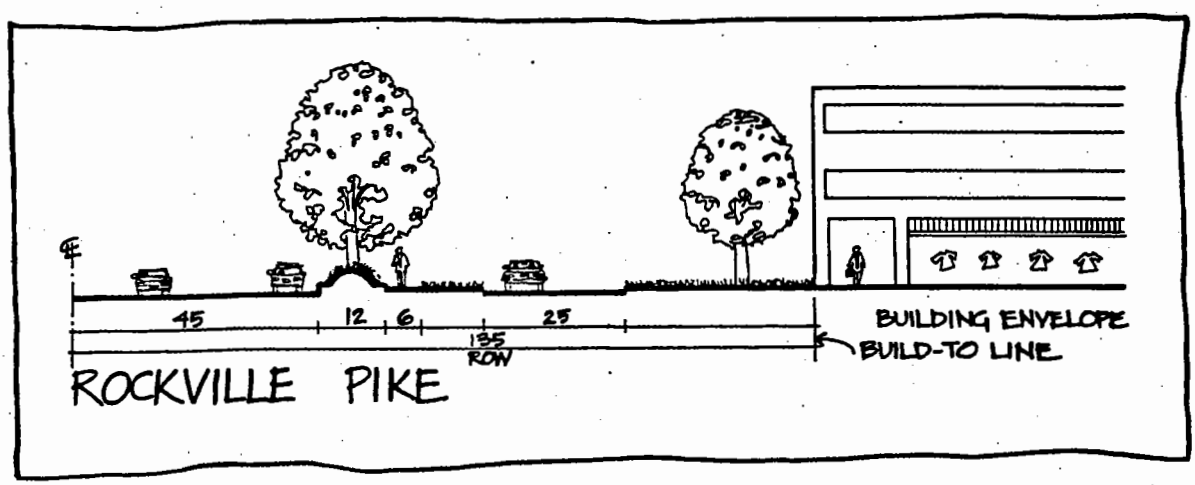
BASE LEVEL DEVELOPMENT

The required streetscape treatment includes a landscaped berm with trees at the road edge, a 6' wide concrete sidewalk and a service drive. Maintain the build-to line at a distance of 135' from the centerline of Rockville Pike to provide a consistent visual image. Street trees shall be a min 3.5 inches in caliper, 15' high and planted no more than 30' apart.

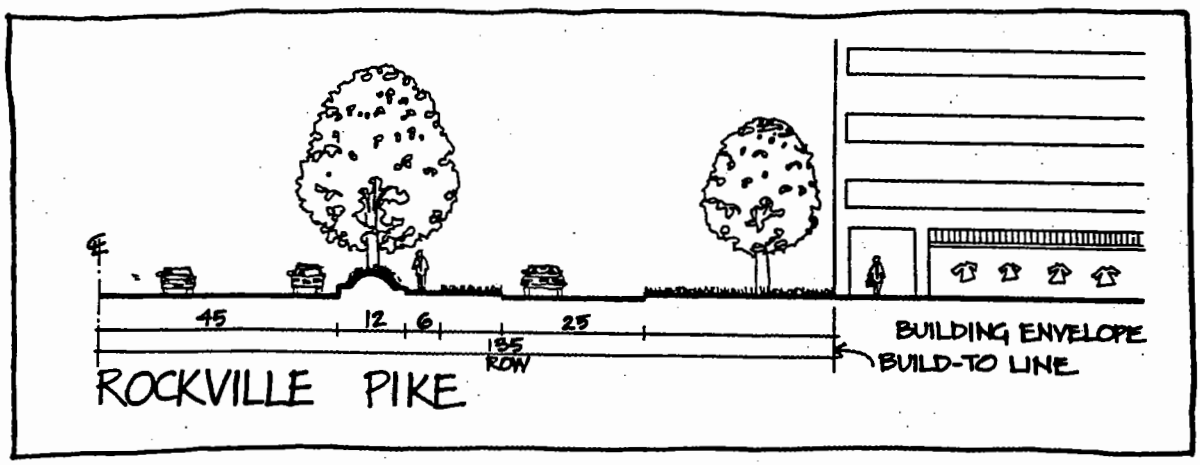


OPTIONAL METHOD DEVELOPMENT

In addition to the minimum requirements stated above, optional method developments shall include: a splash block at the Rockville Pike curb edge, London walk pavers, additional berm landscaping and a tree bed with landscaping at the building edge.



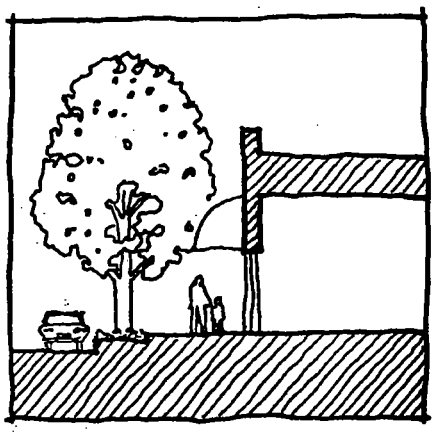
BASE LEVEL DEVELOPMENT



OPTIONAL METHOD DEVELOPMENT

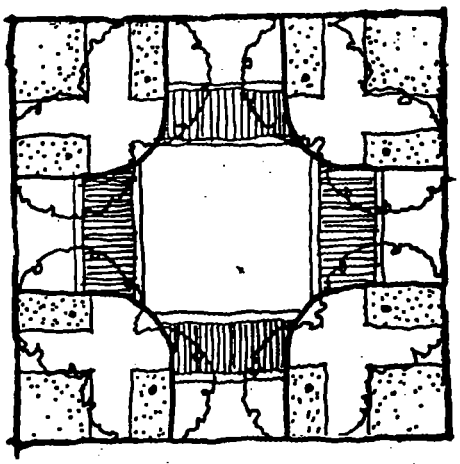
RPC URBAN DESIGN GUIDELINES
PEDESTRIAN AREAS

The following guidelines define and suggest pedestrian oriented spaces and linkages. Elements such as sidewalks, crosswalks, bus shelters and benches improve convenience and make the pedestrian feel safe and comfortable. Also signs and lighting contribute to a pedestrian's orientation and safety. Signs must conform to the City's Sign Ordinance and lighting design is reviewed in the Twinbrook Metro Area.



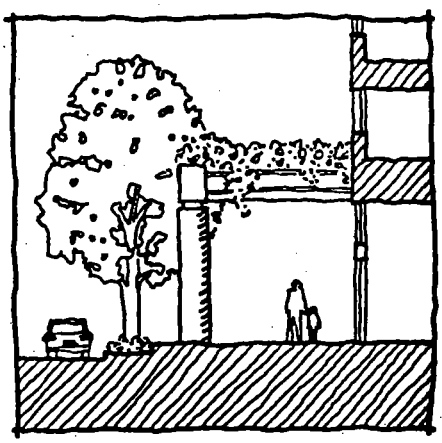
SIDEWALKS

A hierarchy of pedestrian pathways are designed to reflect pedestrian travel needs and aesthetic criteria relating to visual prominance. Sidewalks in commercial areas shall be a minimum of 6 feet in width. Residential area sidewalks shall be 5 feet wide when adjacent to the curb, or 4 feet wide when separated by a landscape strip.



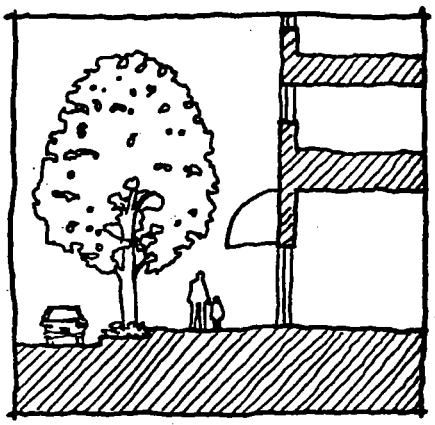
CROSSWALKS

Where public pedestrian ways cross private roads, crosswalks shall be installed subject to approval by the Department of Public Works.



ARCADES & COLONNADES

Furnish a continuous covered passageway to provide weather protection in inclement weather. Arcades may be added to existing buildings or may be incorporated into the design of new buildings. Design arcades with a minimum depth of 12' and a minimum height of 12', not to exceed two stories.



AWNINGS

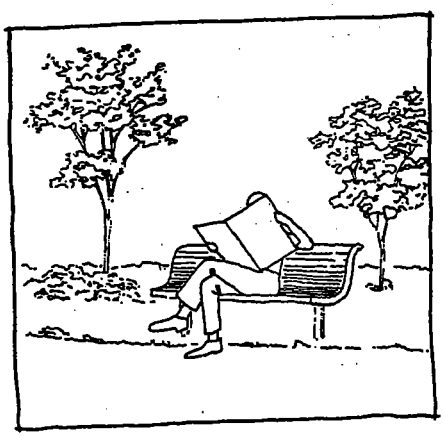
In locations where building arcades and colonnades are not provided. Awnings may be used to enliven pedestrian areas and sidewalks. The use of bright fabric awnings over entrances and along walkways enhances pedestrian comfort and creates visual interest and vitality.

PLAZAS AND OPEN SPACES

Plazas and open spaces are defined on three sides by buildings, walls and landscaping. These elements greatly enrich the pedestrian environment by creating focal points. Features such as fountains, planters, cafes, special lighting and kiosks should be included to create a pleasant setting.

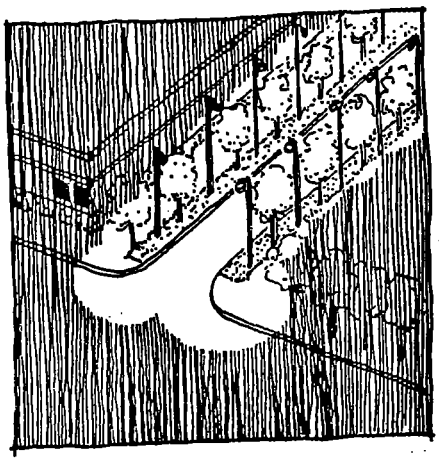
BUS SHELTER

The bus shelter to be used throughout the corridor is a protective feature with a long bench, tempered glass on three sides and posted bus schedules. The bus shelter shall be consistent with those being installed by WMATA.



BENCH

The standard bench to be used in or adjacent to the public rights of way throughout the corridor is the PADC (Pennsylvania Avenue Development Corporation) bench by Macatta. This bench is made of oak slats on a steel frame in "single" and in "back to back" versions.



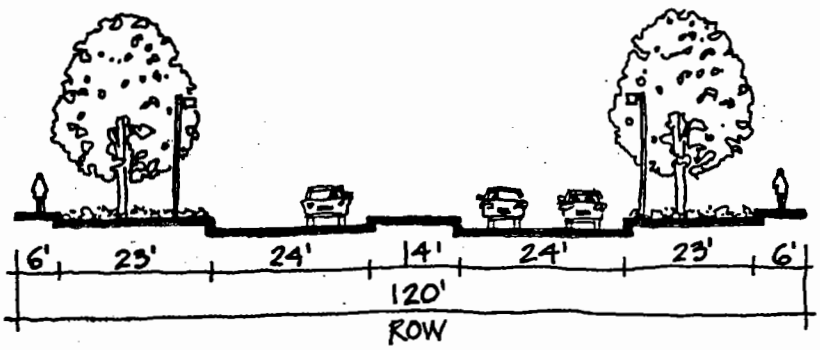
LIGHTING

Pedestrian areas should be adequately lit for pedestrian orientation to ensure greater safety, security and visibility. Coordinated fixtures contribute to the creation of a unified and pleasing appearance. Selected lighting fixtures should complement the building design and streetscape.

RPC URBAN DESIGN GUIDELINES

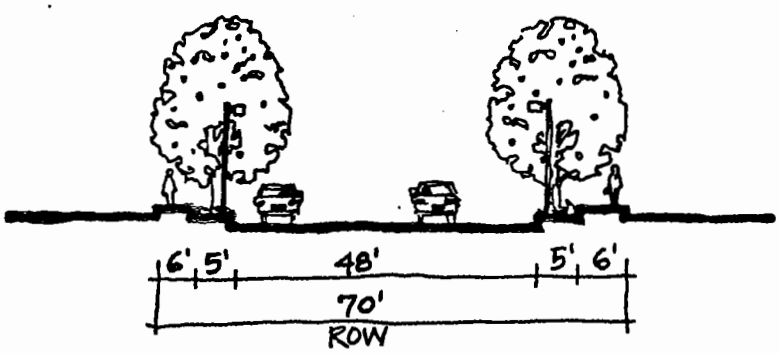
PUBLIC ROADWAYS

Vehicular movement is enhanced by improving the existing roadway network in the Rockville Pike Corridor. These improvements offer more options to motorists, increase the efficiency of local circulation, improve access to properties, and decrease intersection congestion. All developments within the Rockville Pike Corridor that dedicate a public right of way or easement for improvements shown in the Plan may include the dedicated area in the net lot area for the purpose of calculating F.A.R. The following roadway standards are required for dedication and construction of new roads in the City:



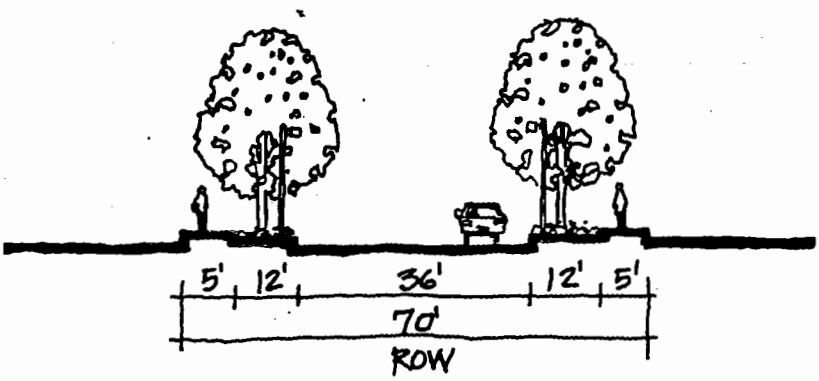
ARTERIAL

Arterial roads are built in a right-of-way at least 120' wide, containing two 24' paved sections separated by a 14' median strip. Curbs, gutters, sidewalks, lighting and landscaping also must be provided.



BUSINESS DISTRICT

Business district roads are built in a right-of-way at least 70' wide, containing a 48' pavement width. Curbs, gutters, sidewalks, lighting and landscaping also must be provided.



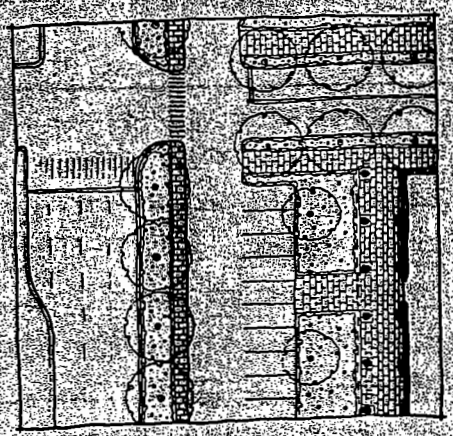
PRIMARY RESIDENTIAL

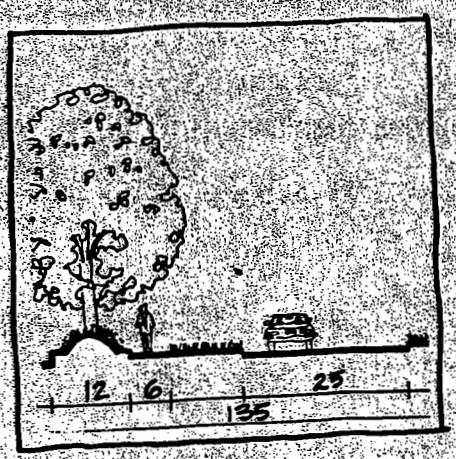
Primary residential roads are built in a right-of-way at least 70' wide containing a minimum pavement width of 36' for vehicular traffic. Curbs, gutters, sidewalks, lighting and landscaping also must be provided.

RPC URBAN DESIGN GUIDELINES

SERVICE DRIVE

Service drives are designed to separate local traffic from through traffic along Rockville Pike. The service drive enhances safety and accessibility by enabling motorists to travel between nearby businesses and to exit parking areas at planned intervals. All developments that dedicate an easement for the service drive may include the dedicated area in the net lot area for the purpose of calculating F.A.R.





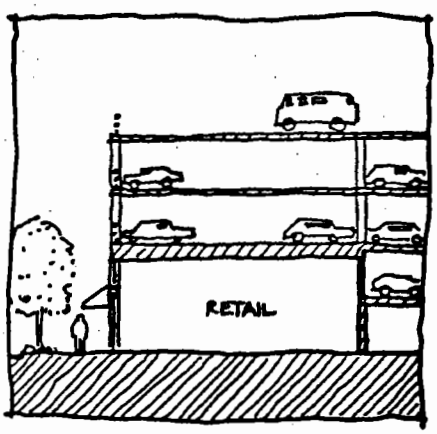
DESIGN STANDARDS

The service drive provide a convenient system to ensure free circulation of vehicular traffic and can function as a well-defined parking lot aisle with head-in parking permitted on both sides. The coordinated alignment between adjacent properties increases its functional efficiency and its value as an organizing visual element. The width of the service drive may not be less than 25'. The location of entrance and exit driveways shall be in substantial accordance with the Rockville Pike Access Management Plan.

RPC URBAN DESIGN GUIDELINES

PARKING STRUCTURE TREATMENT

Parking structures should be sensitively designed to assure the harmonious integration of each facility with the adjacent commercial and residential development, as well as with its natural environment. A sense of visual harmony can be achieved through the use of compatible materials, coordinated landscaping and screening, appropriate building color, sensitive lighting and signage, and the design of related amenities

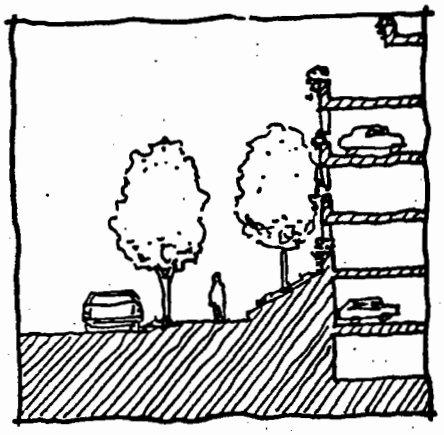


GROUND FLOOR USES

The effect of parking structures can be minimized by placing retail use along the street frontage. This creates interest and activity at the ground floor where pedestrians and motorists are located.

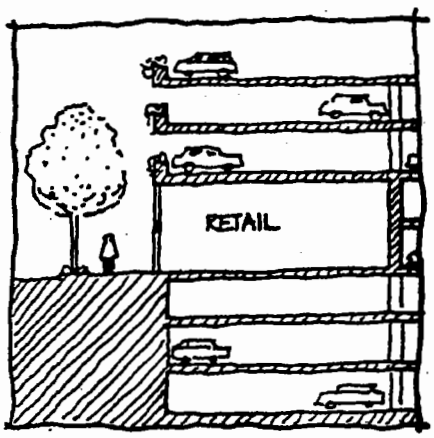
FACADE TREATMENT

Parking structure facades should achieve the same high quality design and appearance as the buildings they serve. Minimize the parking structure's utilitarian appearance by utilizing effective design treatments such as colonnades, arcades, awnings, street furniture and other public amenities.



LANDSCAPING

Where ground floor retail is inappropriate, the use of landscaping is effective in softening hard edges and minimizing bulk. A structure may be set back from the building line to allow for an additional row of trees, berms and plantings. If constructed at the building line, the appearance may be improved with planters and stepped-back upper floors. Openings for vehicular access should avoid crossing major pedestrian paths and are subject to review by a Design Review Board, and must conform with the Rockville Pike Corridor Neighborhood Plan.



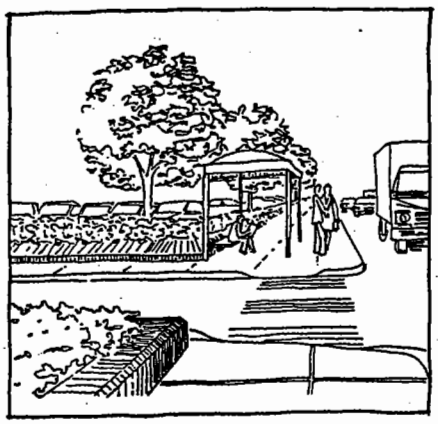
PARKING STRUCTURE HEIGHT

The height of parking structures should be minimized, especially at the street edge. The height of parking facilities that are placed at the street edge should not exceed 35' above grade, and not will not be eligible for the additional building height available in the optional method of development. If a structure is enclosed within a building complex and not visible from the street, the building height restriction is 75'. Underground levels are encouraged to increase parking capacity.

RPC URBAN DESIGN GUIDELINES

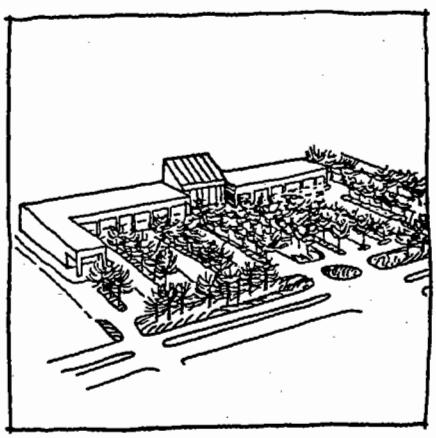
PARKING LOT TREATMENT

Parking lots should be screened from view from public roads and adjacent residential or developed areas. Buffering and screening shields unsightly areas and parked cars, defines special areas, creates attractive views, and provides a cohesive transition between non-similar uses.



PARKING LOT EDGES

Parking lots adjacent to public rights-of-way shall be screened with evergreen plantings, ground-covered berms or walls at least 2.5 feet high. Achieve at least 75% continuous opacity to soften the visual impact. Parking lots adjacent or opposite to residential zoned or developed land shall be screened to a height of 5' with evergreen plantings, walls or earth berms achieving 100% opacity.



PARKING LOT INTERIORS

Deciduous trees should be used in parking lots to relieve the monotony of large paved masses. Trees planted approximately 30' apart in continuous beds of ground cover provide an overhead canopy and define the space by directing the line of pedestrian and vehicular movement. Walkways should be separated from vehicular traffic by elevation, landscaping or surface treatment such as brick pavers, flagstone, or other safe and attractive materials.

RPC URBAN DESIGN GUIDELINES

LANDSCAPE SCREENING OF NON-SIMILAR USES

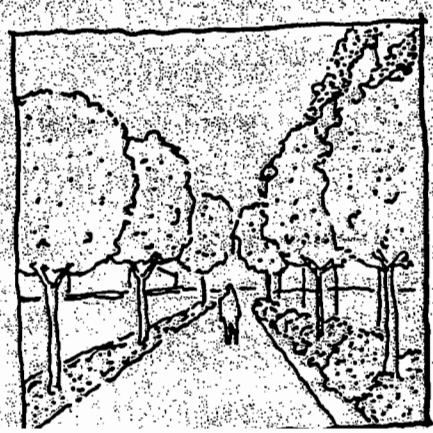
Plant a continuous row of coniferous (evergreen) trees between non-similar uses. The landscape buffer provides a transition between different zones, creates privacy, screens unsightly areas and defines special areas. Trees at time of planting shall be a minimum of 15 feet high with at least 75% continuous opacity, planted in a diagonal grid.

NON-SIMILAR USES

All developments in the RPC zone shall provide screening between non-similar uses.

These include:

1. residential/retail
2. residential/office
3. residential/major road
4. Metro tracks/any use
5. as otherwise indicated

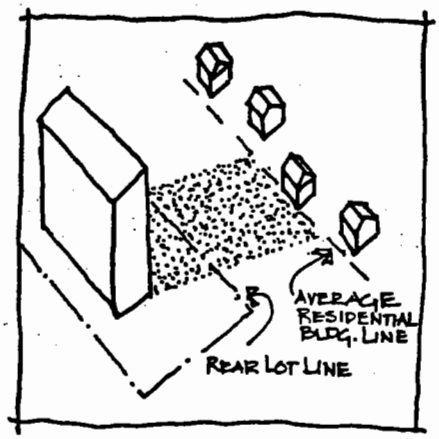


SCREEN RETAINING WALLS & FENCES

Plant a continuous landscape screen in front of retaining walls and fences to soften the mass and hard edges. Provide 75% opacity in a continuous row or staggered planting.

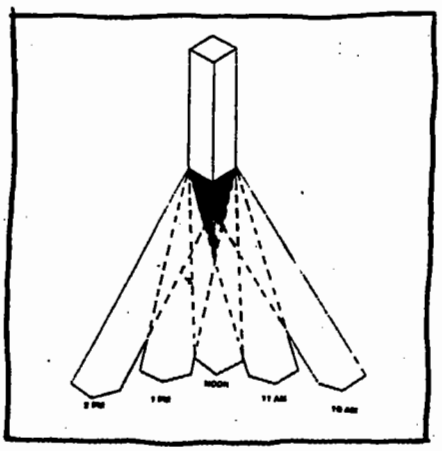
RPC URBAN DESIGN GUIDELINES
SOLAR ACCESS REQUIREMENTS

In order to minimize the impact of tall buildings on residential structures, no buildings may cast a shadow on adjacent residential structures between 10 a.m. and 2 p.m. as calculated for December 21. The shadows produced on December 21 are the longest of the year and compliance will result in lesser impacts during the remainder of the year.



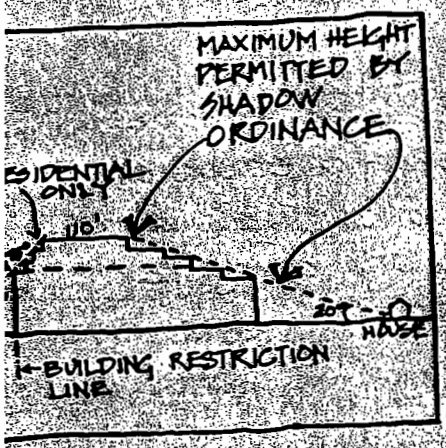
SHADOW STUDY

A shadow study is performed for developments that may cast shadows on residential structures. The shadow study follows the technique recommended for solar path diagrams in Architectural Graphics Standards, 7th Edition. This study should indicate the area where shadows will fall between 10 a.m. and 2 p.m. on December 21.



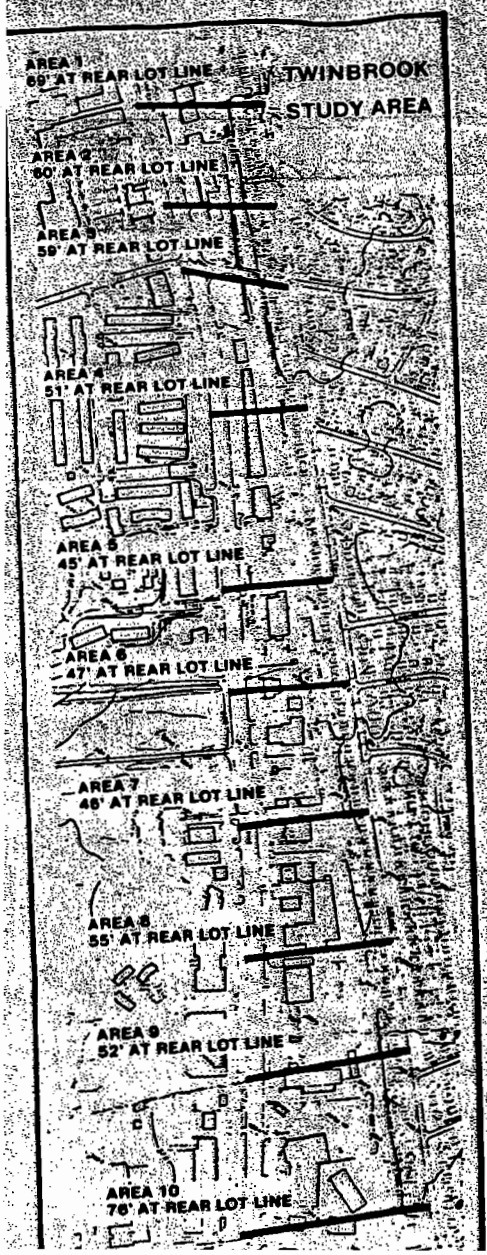
RESIDENTIAL TOWERS

Widely spaced towers are exempt from the solar access regulation. This is due to the small footprint of a tower that results in a thinner shadow which moves across the property quickly, much like a sundial. A residential tower is considered to be a building where the width is not more than 10% greater than the depth or vice versa. The separation between two towers must be at least equal to the height of the taller structure for them to be "widely spaced."



GENERAL APPLICATION

The accompanying sketches illustrate the general application of the Solar Access Requirement. The drawing to the left illustrates the maximum height permitted by the shadow ordinance; this approximates a 20° angle originating from the average residential building line. Compliance with the ordinance impacts the design of tall buildings, especially in light of the building envelope step-back required by the 45° layback plane along Rockville Pike.

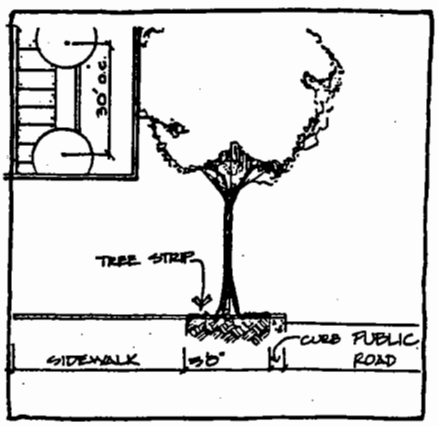


TWINBROOK CASE STUDY

The Twinbrook neighborhood was selected to test the effect of the Solar Access Requirements. Ten areas were designated for study and the average distance of the area's houses from the rear lot line of adjacent commercial properties was determined. A solar path diagram for 40° N. latitude was utilized for the study. Rockville lies at 39° 15", which results in shorter shadows. In practice, the individual shadow studies will produce greater accuracy.

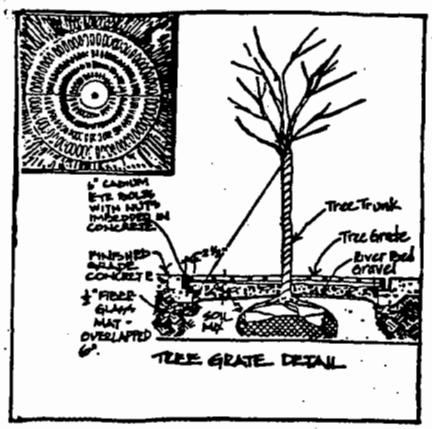
RPC URBAN DESIGN GUIDELINES
TREE PLANTINGS

The following guidelines attempt to make walking safe, convenient and attractive in the Rockville Pike Corridor.



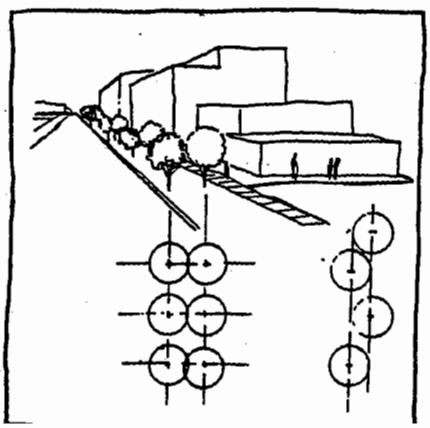
TYPICAL

Street trees shall be planted in continuous tree strips, a minimum of 5'-0" wide between the curb and sidewalk. Street trees at the time of planting shall be a minimum of 3.5 inch caliper, 15' high. Street trees shall be planted about 30' on center parallel to the street. In no cases should trees be planted more than 40' apart. Trees shall be selected from the City of Rockville's Approved Tree List.



GRATE DETAIL

When trees are to be planted in continuous paved areas they shall be planted in tree pits with grates.

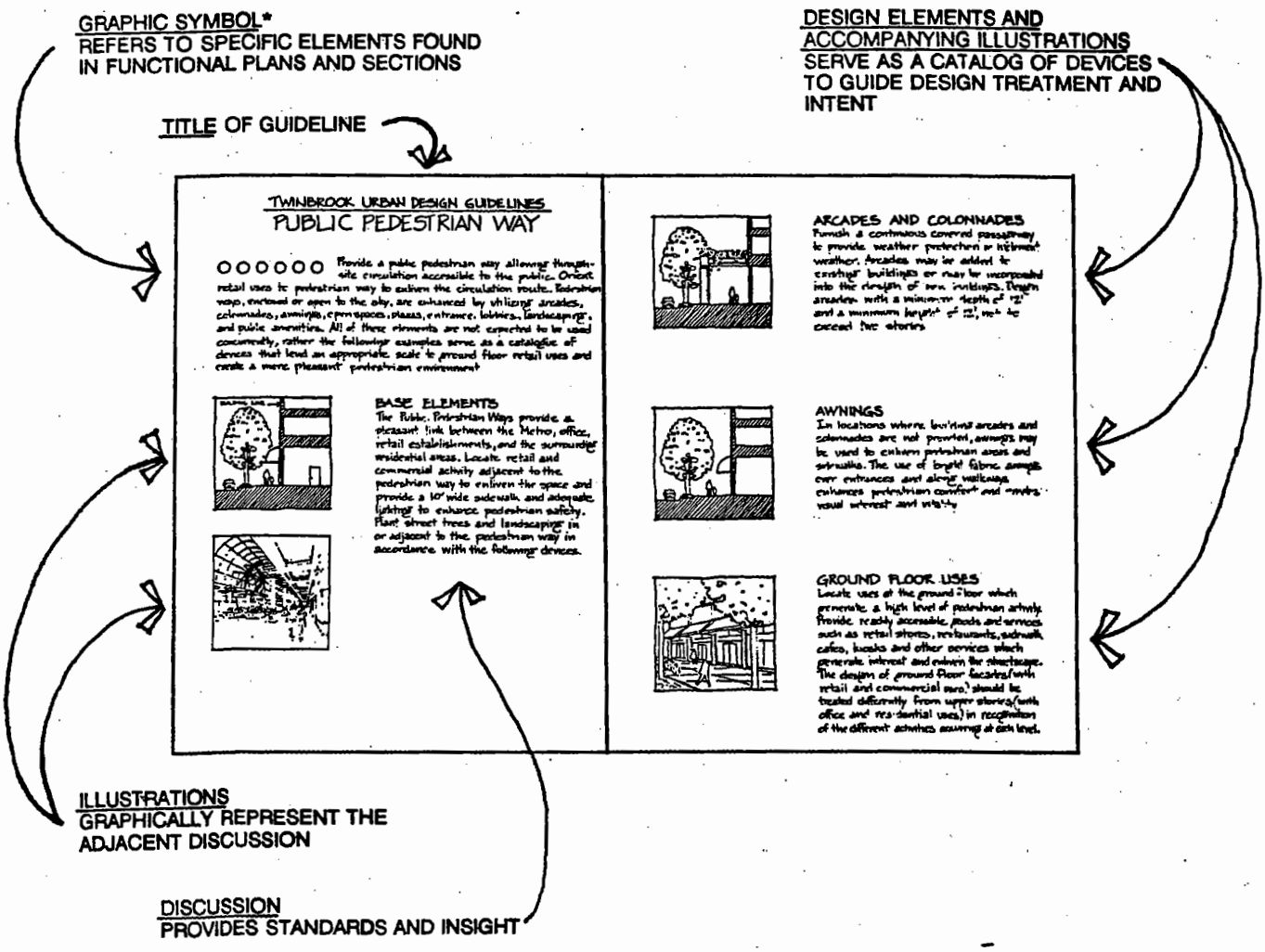


PLANTING GRIDS

Where parallel rows of trees frame a pedestrian way or other pathway, they shall be planted on a rectangular grid. In certain cases where the local site dictates, or, when 100% opacity is desired at the time of planting, trees may be planted in diagonal grids.

Urban Design Guidelines

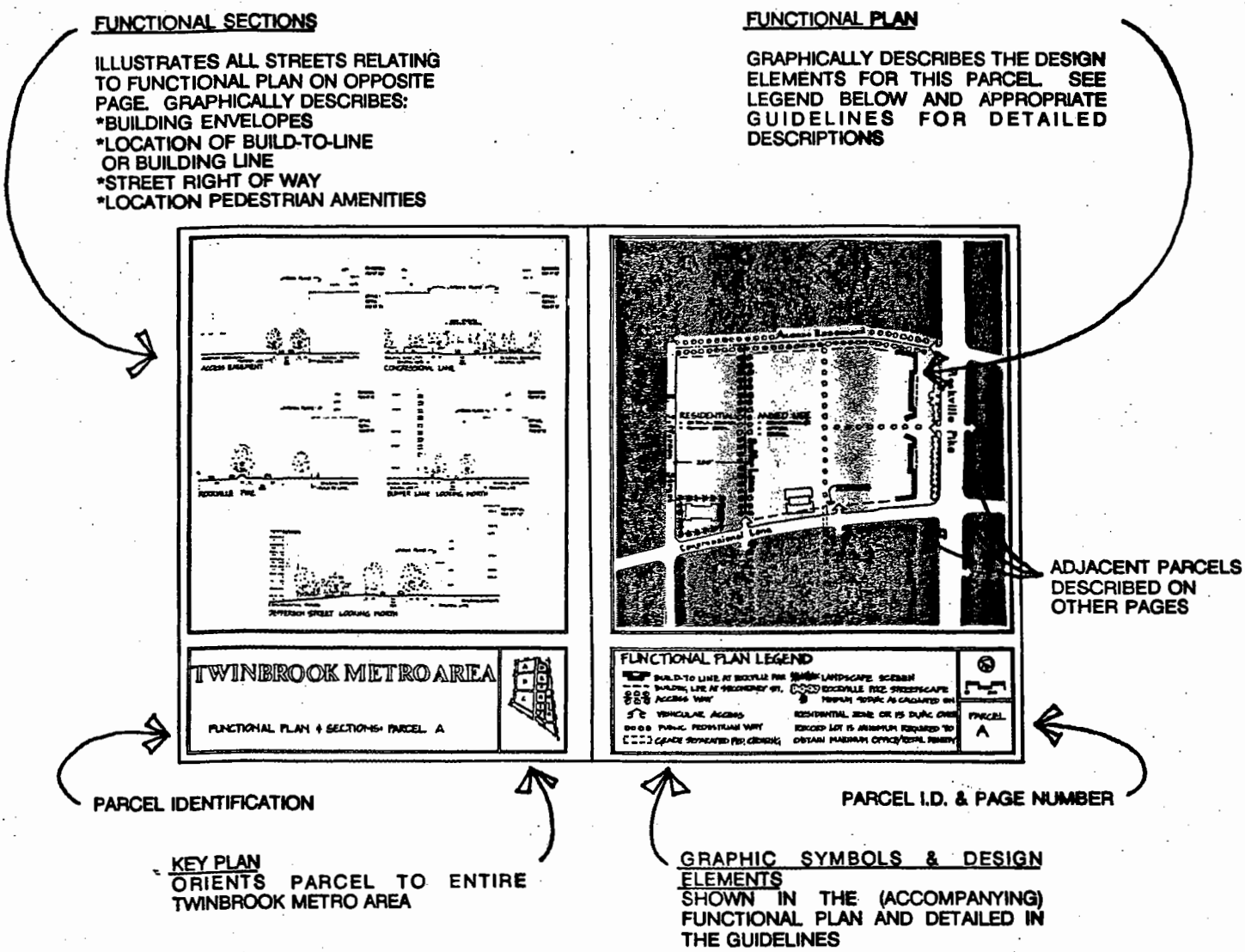
The Urban Design Guidelines are intended to provide a framework which will ensure the quality of the built environment in the Metro Performance District. They serve as a general guide to developers and architects preparing for design review by illustrating the City's objectives. The guidelines highlight and supplement certain requirements set forth in the Zoning Ordinance in order to visually define the intent of the regulations and to give a number of suggestions for ways to achieve the desired outcome (see pages 94 to 119). Several ordering devices have been used to provide clarity and continuity.



*Where no symbol appears, the guideline illustrates a general recommendation for the entire Metro Performance District.

Functional Plans and Sections

The Functional Plans and Sections incorporate the Urban Design Goals, Strategies and Guidelines to guide the future development of specific parcels in the Metro Performance District. While the guidelines are generalizations considered applicable to all parcels in the Metro Performance District, the Functional Plans and Sections illustrate specific concepts for specific areas. Parcel-by-parcel design recommendations are used to provide guidance, reduce uncertainty and ensure quality in the built environment (see pages 120 to 132). Several ordering devices have been used to provide clarity and continuity.



TWINBROOK URBAN DESIGN GUIDELINES

BUILD-TO LINES

ROCKVILLE PIKE

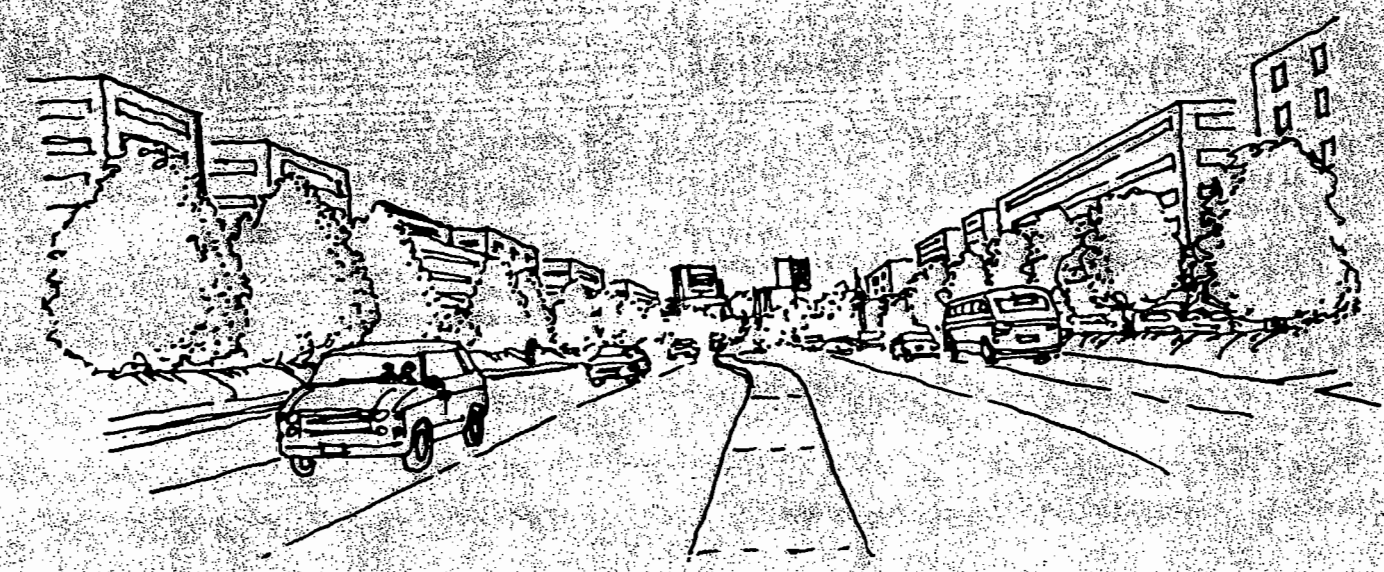
Place at least 50% of the Rockville Pike facade 135' from the centerline of Rockville Pike to provide a consistent visual image. Orient retail and services to the street and provide amenities that promote pedestrian activity.

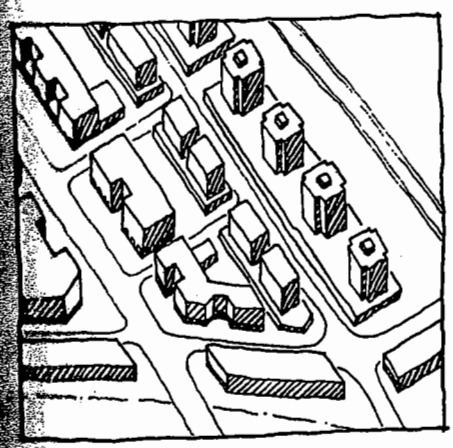
SECONDARY STREETS WITH RETAIL

Place at least 50% of the lower floors of buildings at the build-to line to create a street edge. Orient retail to the street on designated secondary streets (Rollins, Halpine, Chapman, Twinbrook Parkway) and provide pedestrian amenities. See individual street sections to determine the build-to line.

SECONDARY STREETS WITH RESIDENTIAL AND SUPPORT RETAIL

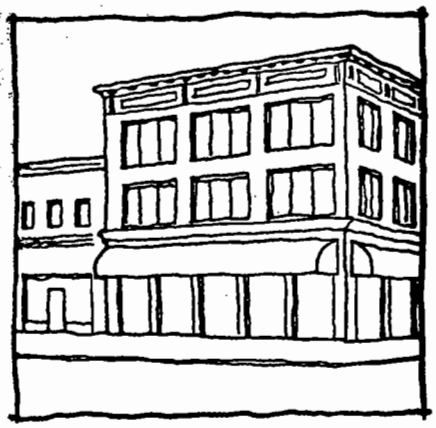
Place at least 50% of the lower floors of buildings at the build-to line to create a street edge. Orient support retail to the street to maintain a consistent visual image at the level of pedestrian activity. Residential units may be set back from the build-to line above the first floor.





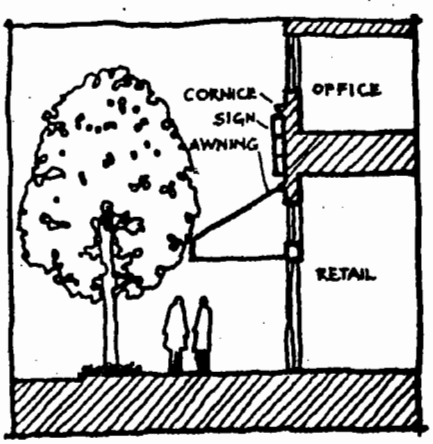
BUILD-TO LINE

A continuous building line creates a consistent street edge and provides a positive visual image to pedestrians and motorists. In order to achieve the desired sense of scale and space, it is most important to maintain this continuous edge at the lower floors of buildings where pedestrians and motorists are located. The shape of streets is improved and pedestrian comfort is enhanced by maintaining a uniform building line at the first two floors, although well-defined open spaces may punctuate the facade to add interest and scale.



FACADE TREATMENT

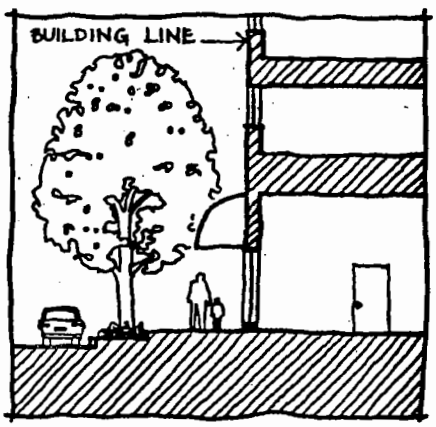
The design of ground floor facades should recognize the different activities occurring at each level. The upper level, with office and residential uses should complement the pedestrian level with its retail and commercial uses. Signs, special features, entrances, and service and parking access can be more easily integrated with the facade when the pedestrian level treatment recognizes the functional differences of the upper levels. This recognition can be achieved with cornices, changes of materials, and other devices that allow changes to occur at grade without affecting upper facades.

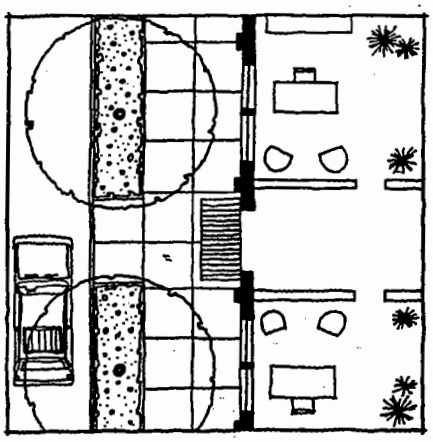


TWINBROOK URBAN DESIGN GUIDELINES

BUILDING LINE AT SECONDARY STREETS

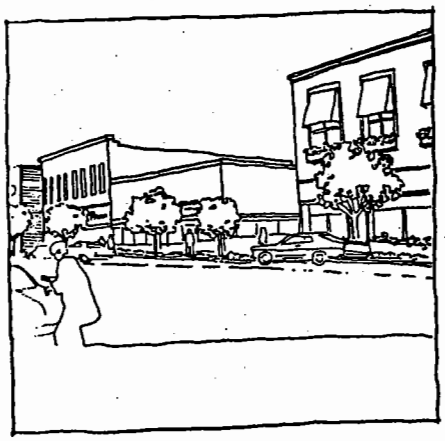
— — — — Place the lower floors of buildings at the building line or alternate building line and orient retail uses and services to the street. Create interest at the pedestrian level with landscaped setbacks, public amenities, awnings, plazas and other devices. Where the building line is not coincident with the Right-of-Way line, the building line shall accomodate the streetscape standards. Consult the Functional Plans and Sections for location and site-specific information.





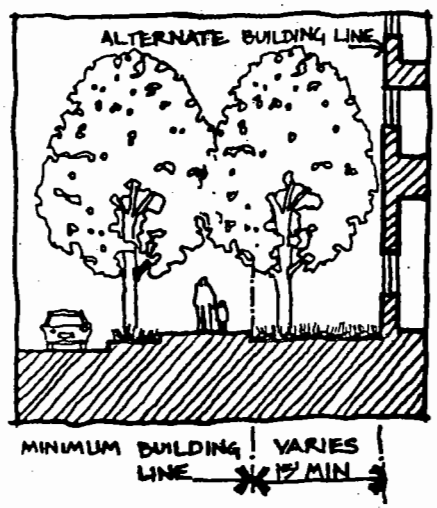
STREETSCAPE STANDARDS

The pedestrian environment should be made safe, convenient and attractive along secondary streets. To achieve this, the standard streetscape features a 5' wide tree planting strip along the roadway, and a 10' wide sidewalk at the building edge. Street trees shall be planted approximately 30' o.c. and not more than 40' apart. Trees shall be selected from the list of "Acceptable Trees for Street Planting in the City of Rockville, Maryland", and at the time of planting shall be a minimum of 3.5" in caliper and 15' high.



MINIMUM BUILDING LINE

Maintain visual continuity of the streetscape by placing the building edge at an established setback line. Secondary and minor streets may have significant pedestrian traffic even though there may be few shops or restaurants located along them. Pedestrian comfort should therefore remain as a prime design consideration.



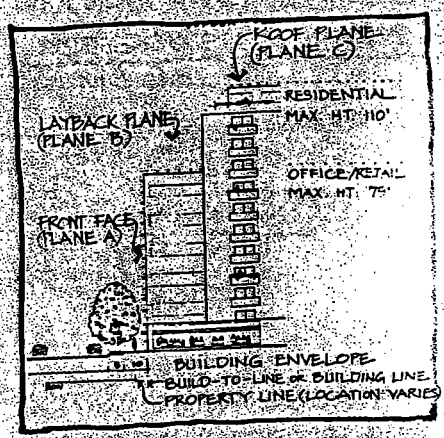
ALTERNATE BUILDING LINE

No setback from the standard streetscape is required. However, if one is desired or proposed, provide a minimum 15' setback and include an additional row of trees on the building side of the sidewalk. The alternate building line may be interrupted to create plazas, open spaces and courtyards. The pedestrian environment can be enhanced by locating parking behind the building and by providing safe and attractive through-circulation for pedestrians.

TWINBROOK URBAN DESIGN GUIDELINES

BUILDING ENVELOPE

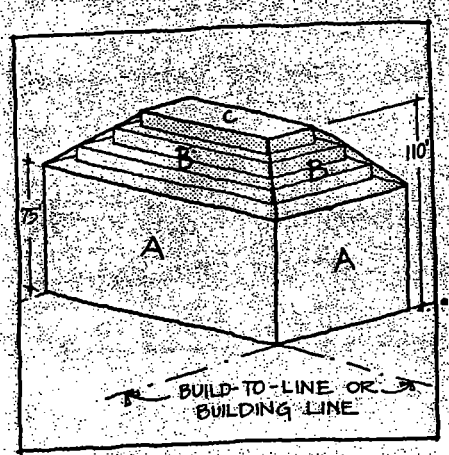
Building envelopes define the vertical and horizontal boundaries of buildable area on individual sites. Consistent relationships between the street and new buildings result from the application of the building envelopes. They ensure that new developments are compatible with surrounding neighborhoods by providing adequate light and air for nearby structures and adjacent streets. Parcel by parcel building envelopes are indicated in the Functional Plans and Sections. Characteristic elements are embodied in the accompanying illustrations and descriptions.



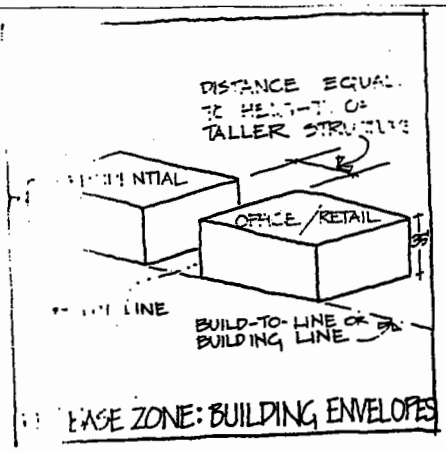
DESCRIPTION

Building Envelope is defined by a combination of the following restrictions:

- height of building
- layback plane
- distance between building and lot lines (setbacks)
- distance between building and street (build-to/bldg line)
- distance between adjacent buildings
- solar access requirements
- maximum F.A.R.
- residential density
- permitted uses
- required open space on the lot



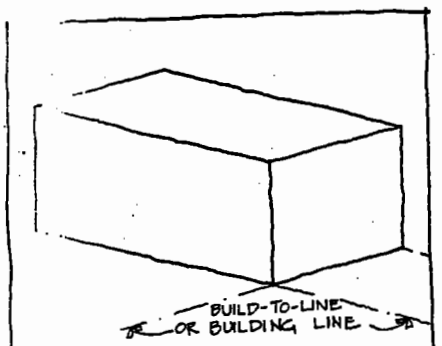
A typical example of the building envelope shows the front face of the building (Plane A) rising vertically from the build-to line or building line to a height of 75'. The area up to 75' may contain office, retail or residential, and no portion of the building face may penetrate this plane. Plane B is referred to as the layback plane and rises at a 45° angle from the top of Plane A (75'). This area above 75' may contain only residences and no portion of the building may penetrate the layback plane. The roof (Plane C) represents the maximum ht of residential buildings in the Twinbrook Metro Area (110').



BASE ZONE: BUILDING ENVELOPES

RPC BASE ZONE

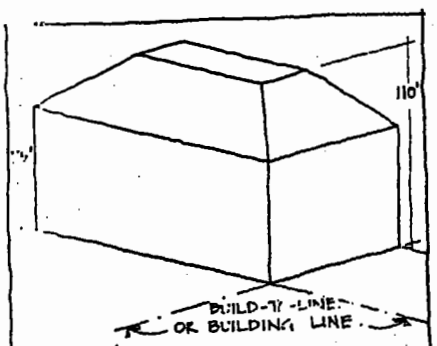
Commercial and residential building envelopes are limited in height to 35'. No setbacks from the side or rear lot lines are required unless residential land abuts the adjacent lot. In that case, the setback must equal the building height of the taller structure.



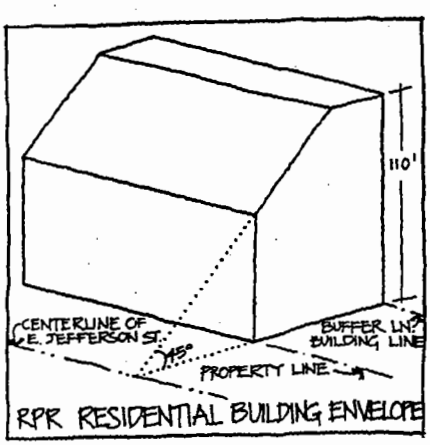
OPT. METHOD: METRO AREA
COMMERCIAL BUILDING ENVELOPE

RPC OPTIONAL METHOD ZONE: TWINBROOK METRO AREA

Commercial building envelopes shall be limited in height to 75'. The height of a residential building is also limited to 75' where it is coincident with the build-to line or building line, however it may extend to a height of 110' if it does not penetrate the layback plane. The two drawings to the left illustrate the building envelopes for commercial and residential structures in the Twinbrook Metro Area.



RPC OPT. METHOD: METRO AREA
RESIDENTIAL BUILDING ENVELOPE



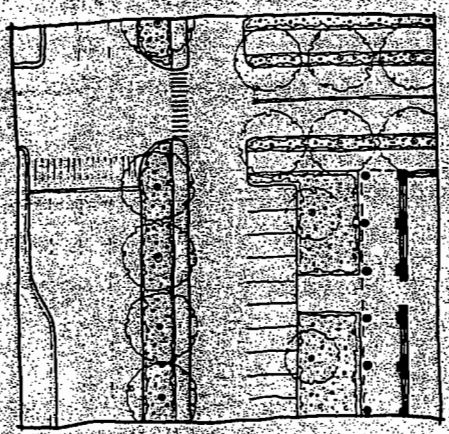
RPR RESIDENTIAL BUILDING ENVELOPE

RPR ZONE

The building envelope for the RPR Zone allows new residential development to relate well to existing residences on the west side of E. Jefferson St. Buildings shall lie within an envelope defined by a height setback plane that is measured from the centerline of E. Jefferson St. and rises at a 45° angle to a height of 110'.

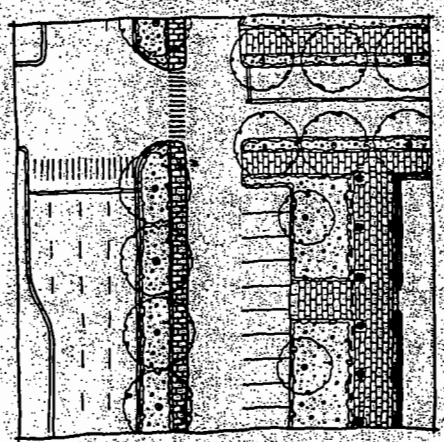
TWINBROOK URBAN DESIGN GUIDELINES
ROCKVILLE PIKE STREETSCAPE

Provide a consistent visual image along Rockville Pike. A pleasant pedestrian environment can be achieved by lining the street level with arcades and retail stores that adjoin the sidewalk and by following the Streetscape Requirements, City of Rockville Sign Ordinance, and Access Management Plan.



BASE LEVEL DEVELOPMENT

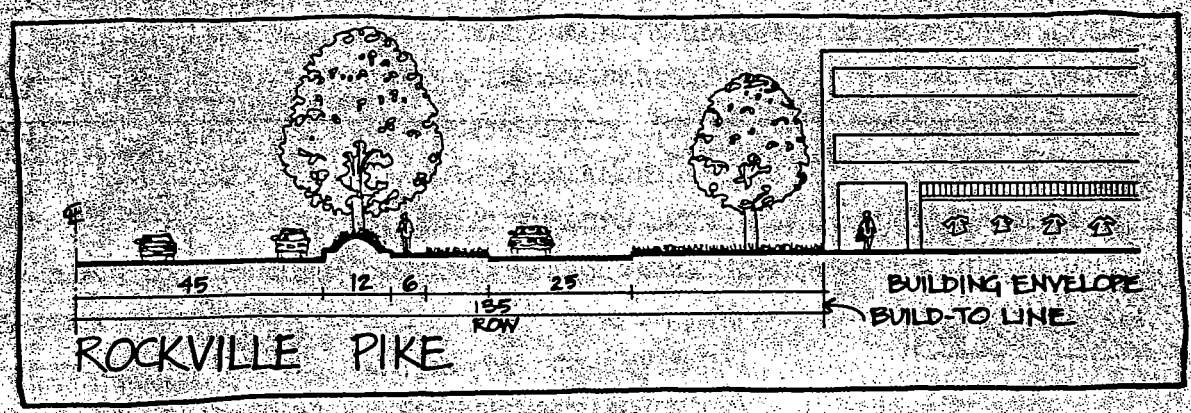
The streetscape treatment includes a landscaped berm with trees at the road edge, a 6' wide concrete sidewalk and a service drive. Maintain the build-to line at a distance of 135' from the centerline of Rockville Pike to provide a consistent visual image. Street trees shall be a minimum 3.5 inches in caliper, 15' high, and planted no more than 30' apart.



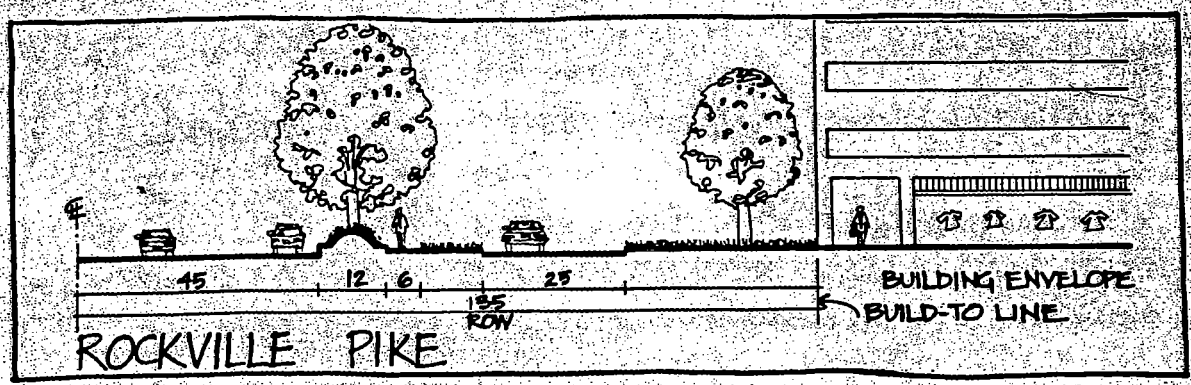
OPTIONAL METHOD DEVELOPMENT

In addition to the minimum requirements stated above, optional method developments shall include the following:

- splash block at Rockville Pike curb edge
- London walk pavers
- additional berm landscaping
- tree bed with landscaping at building edge



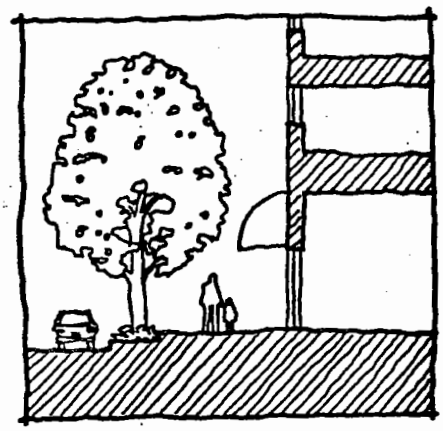
BASE LEVEL DEVELOPMENT



OPTIONAL METHOD DEVELOPMENT

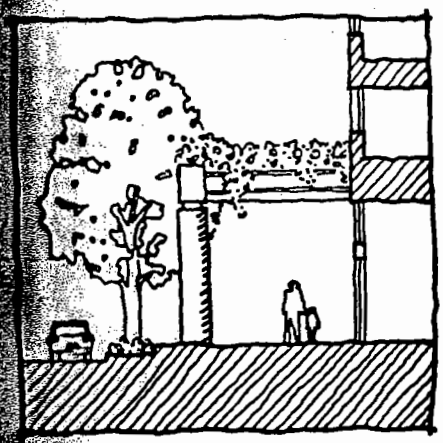
PUBLIC PEDESTRIAN WAY

○○○○○○ Provide a public pedestrian way allowing through-site circulation accessible to the public. Orient retail uses to pedestrian way to enliven the circulation route. Pedestrian ways, enclosed or open to the sky, are enhanced by utilizing arcades, colonnades, awnings, open spaces, plazas, entrance lobbies, landscaping, and public amenities. All of these elements are not expected to be used concurrently, rather the following examples serve as a catalogue of devices that lend an appropriate scale to ground floor retail uses and create a more pleasant pedestrian environment.



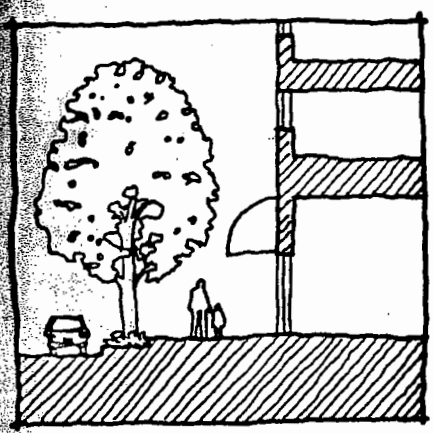
BASE ELEMENTS

The Public Pedestrian Ways provide a pleasant link between the Metro, office, retail establishments, and the surrounding residential areas. Locate retail and commercial activity adjacent to the pedestrian way to enliven the space and provide a 10' wide sidewalk and adequate lighting to enhance pedestrian safety. Plant street trees and landscaping in or adjacent to the pedestrian way in accordance with the following devices.



ARCADES AND COLONNADES

Furnish a continuous covered passageway to provide weather protection in inclement weather. Arcades may be added to existing buildings or may be incorporated into the design of new buildings. Design arcades with a minimum depth of 12' and a minimum height of 12', not to exceed two stories.

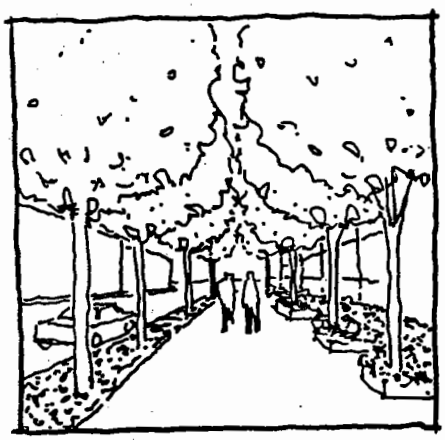


AWNINGS

In locations where building arcades and colonnades are not provided, awnings may be used to enliven pedestrian areas and sidewalks. The use of bright fabric awnings over entrances and along walkways enhances pedestrian comfort and creates visual interest and vitality.

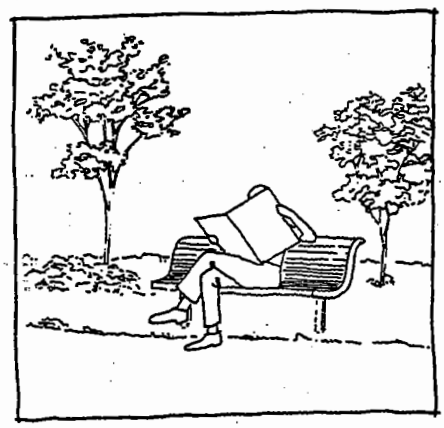
GROUND FLOOR USES

Locate uses at the ground floor which generate a high level of pedestrian activity. Provide readily accessible goods and services such as retail stores, restaurants, sidewalk cafes, kiosks and other services which generate interest and enliven the streetscape. The design of ground floor facades (with retail and commercial uses) should be treated differently from upper stories (with office and residential uses) in recognition of the different activities occurring at each level.



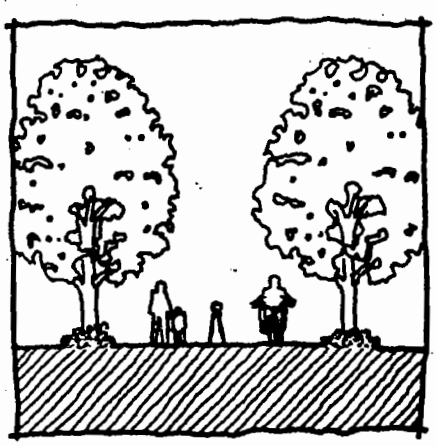
LANDSCAPING

Landscaping adds significantly to the quality of the environment and includes street trees, ornamental plantings, hedges and vegetation for buffering and screening. Landscaping softens building mass and hard edges, provides continuity between different developments, and defines walkways, open spaces, and special areas such as entrances.



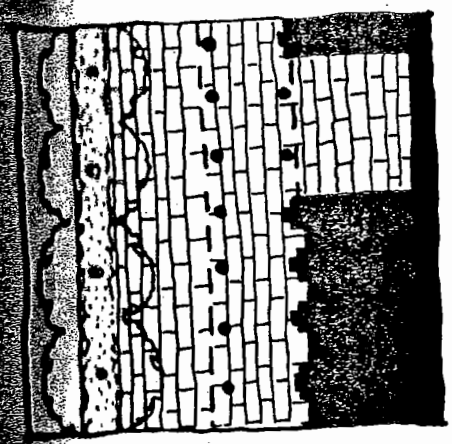
PUBLIC AMENITIES

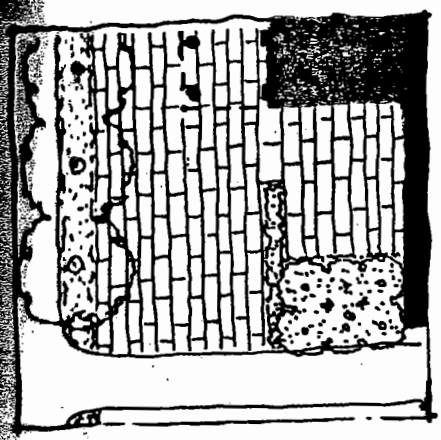
Public amenities such as artwork, kiosks, water features, street furniture, and attractive lighting defines and enriches the Pedestrian Way. Design these amenities as part of the pedestrian space so as not to interfere with pedestrian movement.

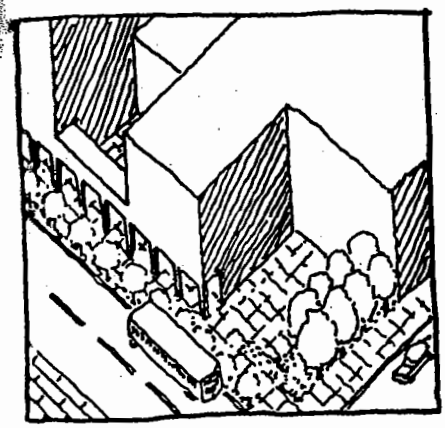


BIKE PATHS

Bike paths provide an alternate mode of transportation and should be at least 10' wide and separated from the Pedestrian Way by either bollards or a continuous landscape strip.

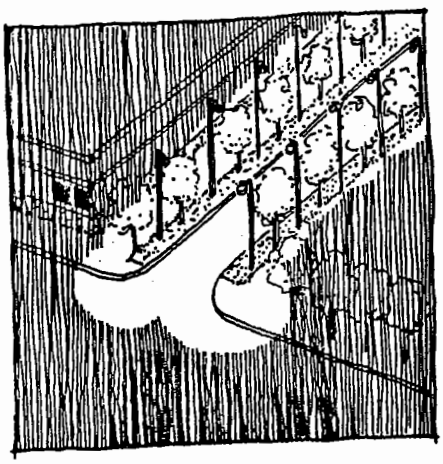






OPEN SPACES, PLAZAS, COURTYARDS

The walking environment is enriched by locating open spaces, plazas and courtyards along the Pedestrian Way. The spaces are defined by the strength of their edges; the design should avoid weak edges that create amorphous spaces which lack focus. Successful open spaces are defined on at least three sides with buildings, walls or landscaping. Space definition and focus within open spaces are created by the use of landscaping and public amenities.

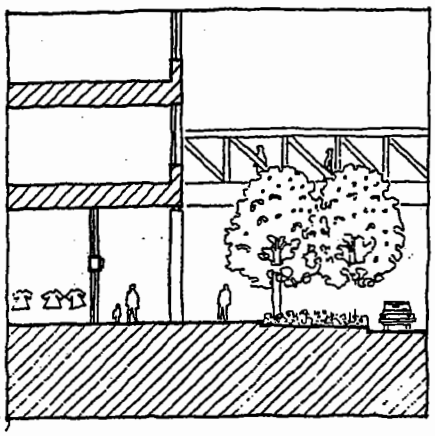


LIGHTING

The Pedestrian Way should be adequately lit for greater safety and security, and to improve pedestrian orientation and visibility. Coordinated fixtures contribute to the creation of a unified and pleasing appearance, and should be decorative wherever possible

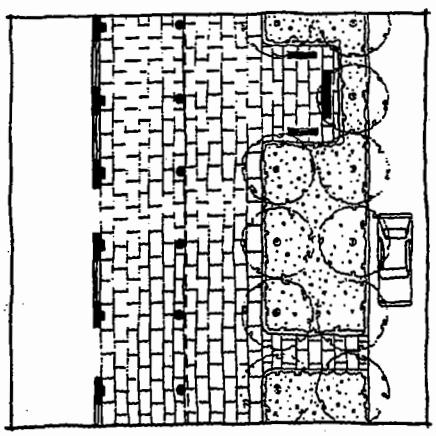
HALPINE PROMENADE

Provide a continuous 25' public pedestrian way on the north side of Halpine Road as outlined below. Establish a strong pedestrian connection between the Twinbrook Metro Station and the commercial and residential neighborhoods west of Rockville Pike, by creating a handsome walkway lined with shops, cafes, arcades, landscaping and public amenities.



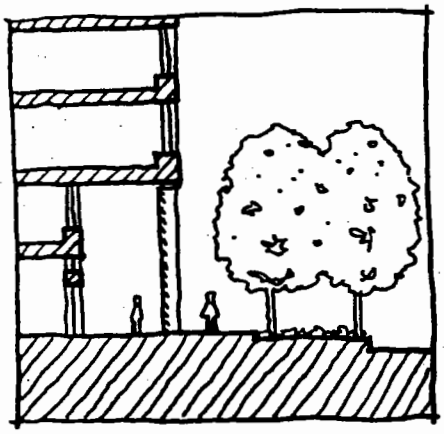
ELEMENTS OF THE PROMENADE

The 25' wide promenade includes a 5' planting strip, a 10' landscape feature (see below) and a 10' minimum sidewalk. Adjacent to the sidewalk is a continuous arcade with retail uses oriented to the arcade.



LANDSCAPE FEATURE

The landscape feature includes a row of trees that may be interrupted to create seating niches and other spaces for pedestrian amenities. Varying the width of the landscape feature can create these special areas or to focus on specimen plantings. Provide at least 60% of the landscape feature with trees, ground cover and flowers. Adjacent to the landscape feature is the 5' tree planting strip that occurs on all streets in the Twinbrook Metro Area.

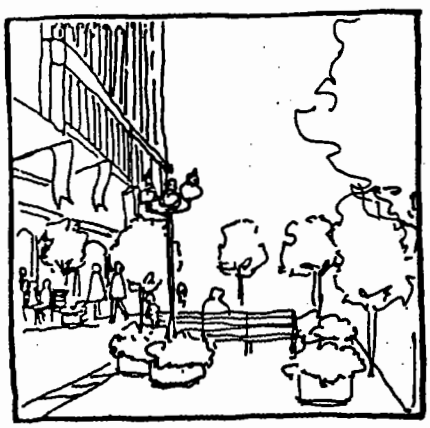


ARCADES AND COLONNADES

Provide a continuous covered passageway for weather protection in inclement weather. Locate arcade adjacent to sidewalk. Design arcades with a minimum depth of 12' and a minimum height of 12', not to exceed two stories.

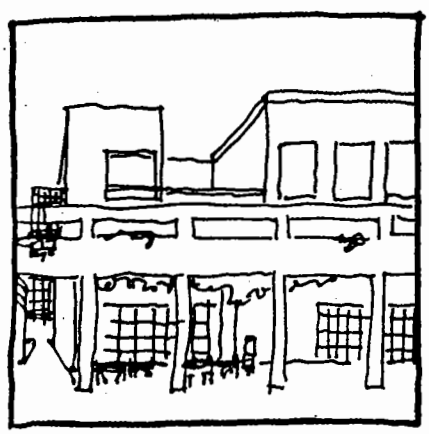
OPEN SPACES, PLAZAS, COURTYARDS

The promenade is enriched by locating open spaces, plazas, and courtyards along the pedestrian walkway and arcade. The open spaces provide areas for sidewalk cafes and other points of focus along the walkway. The building line may be interrupted as long as the continuous arcade is maintained.



PUBLIC AMENITIES

The promenade is enriched with amenities such as art work, water features, street furniture, attractive lighting and special paving treatment. Design these elements as part of the pedestrian space so as not to interfere with pedestrian movement.

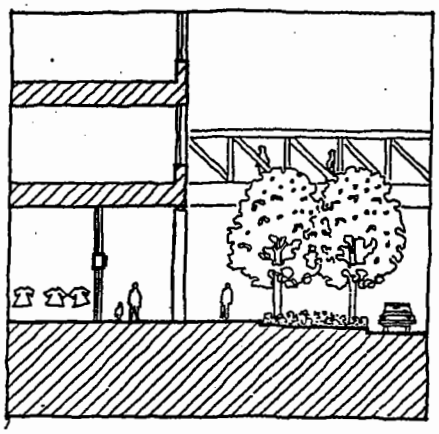


GROUND FLOOR USES

Orient retail uses to the arcade to create a high level of pedestrian activity. The design of ground floor facades (retail/commercial uses) should be treated differently from upper stories (office/residential uses) in recognition of the different activities occurring at each level.

GRADE SEPARATED PEDESTRIAN CROSSING

Enclosed pedestrian ways that cross above or below public and private roads may be provided. An unobstructed walking area at least 12' wide should be designed in a style and character consistent with the connecting buildings. The crossing is not a mandatory requirement, however the City encourages a continuous passageway to facilitate pedestrian movement.

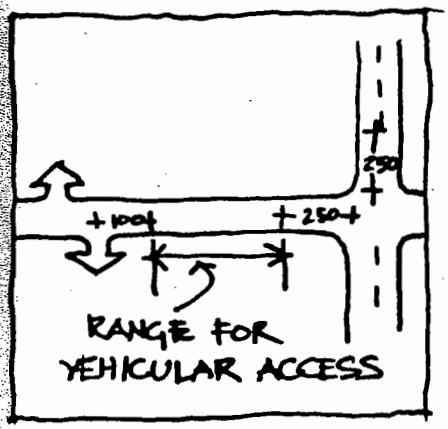


OVERPASS

An overpass is a pedestrian bridge connecting buildings at the second floor, and is reached by escalators from the ground. It may include activities such as retail stores and cafes.

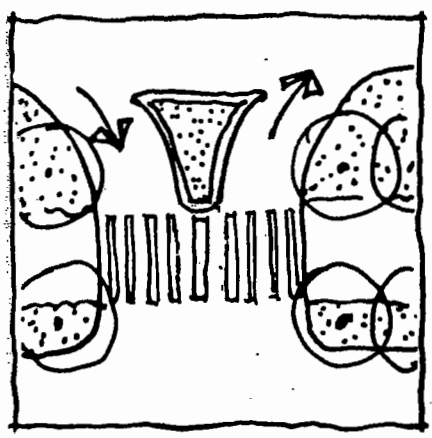
VEHICULAR ACCESS TO PRIVATE SITES

Vehicular access to private sites is provided by private drives from public ways. Guidance for the location of access points is contained in the Functional Plans and the Access Management Plan. These points of entry are based on the following criteria as adjusted for actual conditions.



RANGE OF VEHICULAR ACCESS

No vehicular access should occur within 250' of an intersection nor within 100' of another point of vehicular access. In order to improve traffic operations and safety, the number of vehicular access points shall be limited. The alignment of vehicular access must be coordinated on both sides of the roadway.



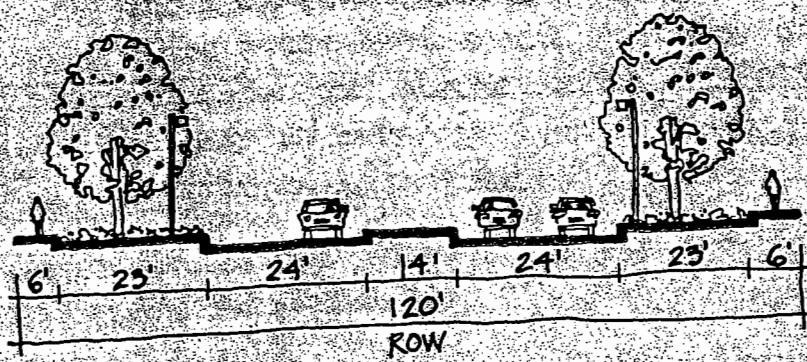
RIGHT IN-RIGHT OUT CURB CUTS

Access to and from sites via right turns is encouraged. The locations indicated are approximate and actual location will be based on safety and efficient traffic operations.

TWINBROOK URBAN DESIGN GUIDELINES

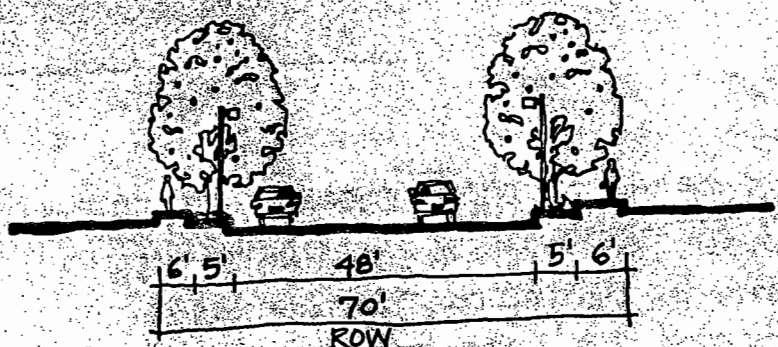
PUBLIC ROADWAYS

Vehicular movement is enhanced by improving the existing roadway network in the Rockville Pike Corridor. These improvements offer more options to motorists, increase the efficiency of local circulation, improve access to properties, and decrease intersection congestion. All developments within the Rockville Pike Corridor that dedicate a public right of way or easement for improvements shown in the Plan may include the dedicated area in the net lot area for the purpose of calculating F.A.R. The following roadway standards are required for dedication and construction of new roads in the City:



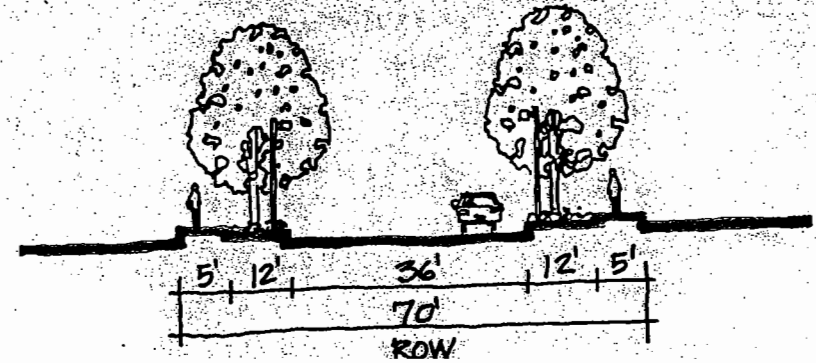
ARTERIAL

Arterial roads are built in a right-of-way at least 120' wide, containing two 24' paved sections separated by a 14' median strip. Curbs, gutters, sidewalks, lighting and landscaping also must be provided.



BUSINESS DISTRICT

Business district roads are built in a right-of-way at least 70' wide, containing a 48' pavement width. Curbs, gutters, sidewalks, lighting and landscaping also must be provided.



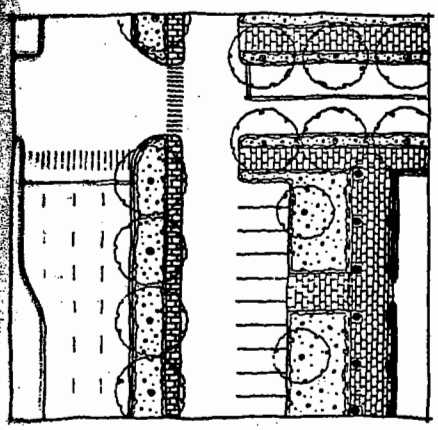
PRIMARY RESIDENTIAL

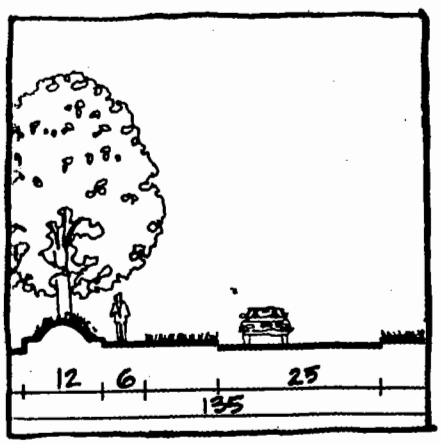
Primary residential roads are built in a right-of-way at least 70' wide containing a minimum pavement width of 36' for vehicular traffic. Curbs, gutters, sidewalks, lighting and landscaping also must be provided.

TWINBROOK URBAN DESIGN GUIDELINES

SERVICE DRIVE

Service drives are designed to separate local traffic from through traffic along Rockville Pike. The service drive enhances safety and accessibility by enabling motorists to travel between nearby businesses and to exit parking areas at planned intervals. All developments that dedicate an easement for the service drive may include the dedicated area in the net lot area for the purpose of calculating F.A.R.





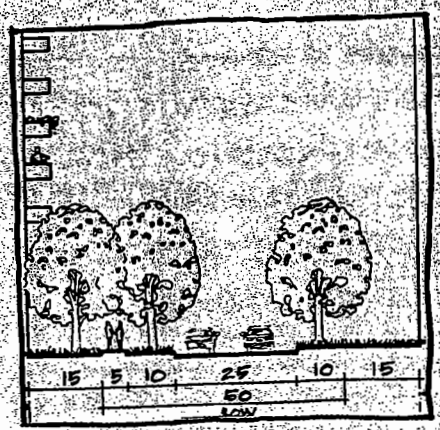
DESIGN STANDARDS

The service drive provide a convenient system to ensure free circulation of vehicular traffic and can function as a well-defined parking lot aisle with head-in parking permitted on both sides. The coordinated alignment between adjacent properties increases its functional efficiency and its value as an organizing visual element. The width of the service drive may not be less than 25'. The location of entrance and exit driveways shall be in substantial accordance with the Rockville Pike Access Management Plan.

TWINBROOK URBAN DESIGN GUIDELINES

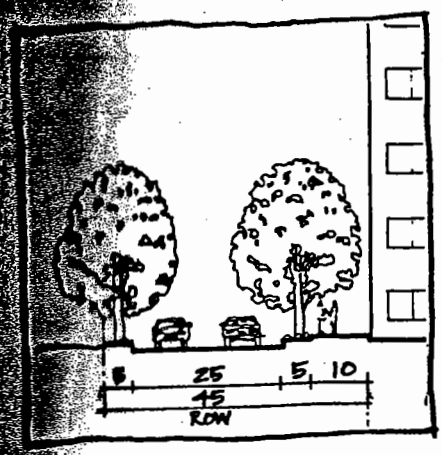
ACCESS WAYS

Separate non-compatible uses with a two-lane access roadway lined on both sides with a continuous row of trees. Access ways provide a transition between residential and mixed use zones and create privacy for the residential units by screening commercial and retail uses.



BUFFER LANE

The roadway allows vehicular access to the interior of the site, and extends a pleasant pedestrian environment beyond the Halpine Promenade. Buffer Lane includes a 25' two-lane road, flanked on both sides by 10' continuous landscape strips with trees, and on the side of the residential development, a 5' wide tree-lined sidewalk. A minimum 15' setback exists on both sides of the easement. If on-grade parking is placed within the setback area, it must include a continuous tree bed with additional landscaping at the sidewalk edge, as well as all screening pertaining to paking lots.



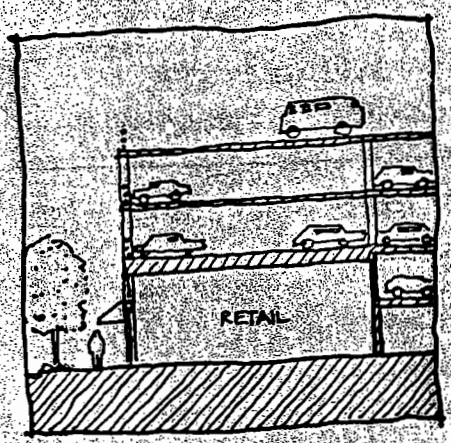
ACCESS EASEMENT

The roadway allows vehicular and pedestrian access to the interior of the site and provides a transition between residential and commercial/mixed uses. Access easement includes a 25' two-lane roadway, flanked on both sides by 5' continuous landscape strips with trees, and a 10' sidewalk on the south side. No setbacks from the sidewalk are required, however if one is provided it shall be a minimum of 15' and include an additional row of trees and landscaping adjacent to new buildings.

TWINBROOK URBAN DESIGN GUIDELINES

PARKING STRUCTURE TREATMENT

Parking structures should be sensitively designed to assure the harmonious integration of each facility with the adjacent commercial and residential development, as well as with its natural environment. A sense of visual harmony can be achieved through the use of compatible materials, coordinated landscaping and screening, appropriate building color, sensitive lighting and signage, and the design of related amenities.

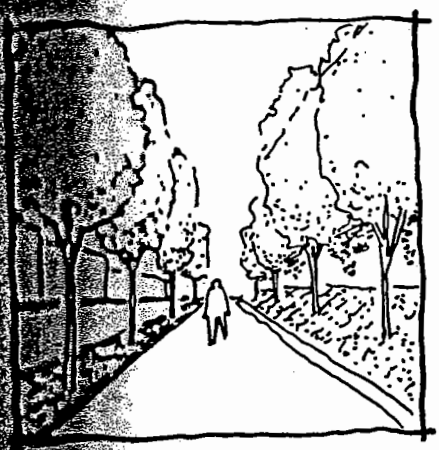


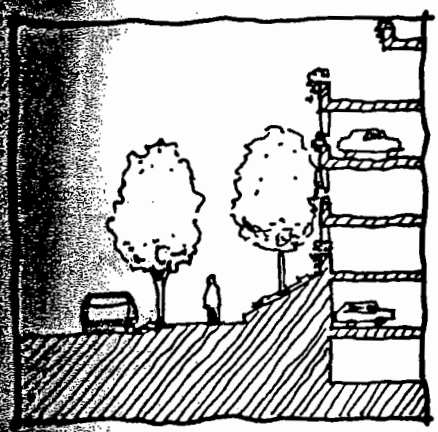
GROUND FLOOR USES

The effect of parking structures can be minimized by placing retail use along the street frontage. This creates interest and activity at the ground floor where pedestrians and motorists are located.

FACADE TREATMENT

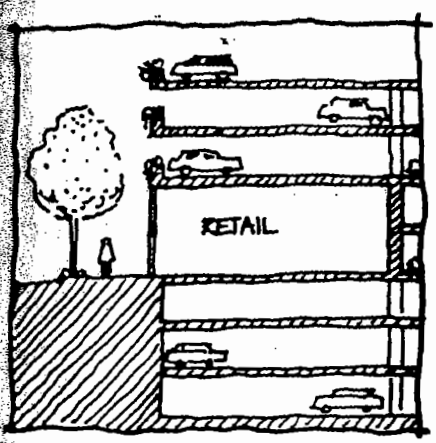
Parking structure facades should achieve the same high quality design and appearance as the buildings they serve. Minimize the parking structure's utilitarian appearance by utilizing effective design treatments such as colonnades, arcades, awnings, street furniture and other public amenities.





LANDSCAPING

Where ground floor retail is inappropriate, the use of landscaping is effective in softening hard edges and minimizing bulk. A structure may be set back from the building line to allow for an additional row of trees, berms and plantings. If constructed at the building line, the appearance may be improved with planters and stepped-back upper floors. Openings for vehicular access should avoid crossing major pedestrian paths and are subject to review by a Design Review Board, and must conform with the Rockville Pike Corridor Neighborhood Plan.



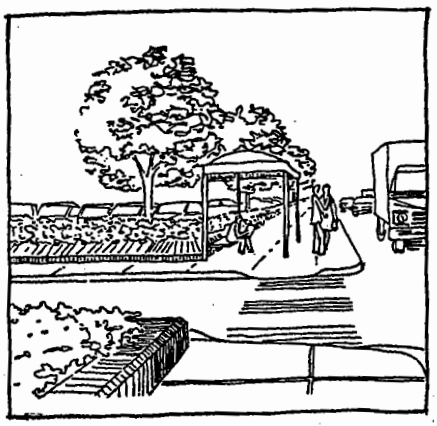
PARKING STRUCTURE HEIGHT

The height of parking structures should be minimized, especially at the street edge. The height of parking facilities that are placed at the street edge should not exceed 35' above grade, and will not be eligible for the additional building height available in the Optional Method of development. If a structure is enclosed within a building complex and not visible from the street, the building height restriction is 75'. Underground levels are encouraged to increase parking capacity.

TWINBROOK URBAN DESIGN GUIDELINES

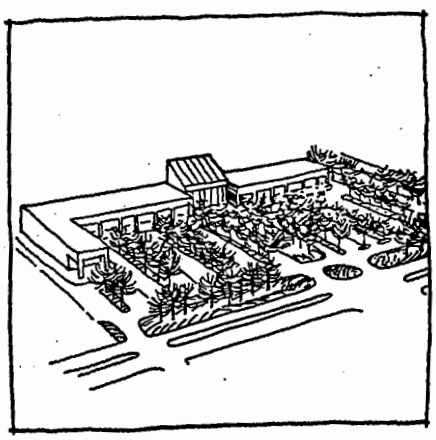
PARKING LOT TREATMENT

Parking lots should be screened from view from public roads and adjacent residential or developed areas. Buffering and screening shields unsightly areas and parked cars, defines special areas, creates attractive views and provides a cohesive transition between non-similar uses.



PARKING LOT EDGES

Parking lots adjacent to public rights-of-way shall be screened with evergreen plantings, ground-covered berms or walls at least 2.5 feet high. Achieve at least 75% continuous opacity to soften the visual impact. Parking lots adjacent to or opposite residentially zoned or developed land shall be screened to a height of 5' with evergreen plantings, walls or earth berms achieving 100% opacity.



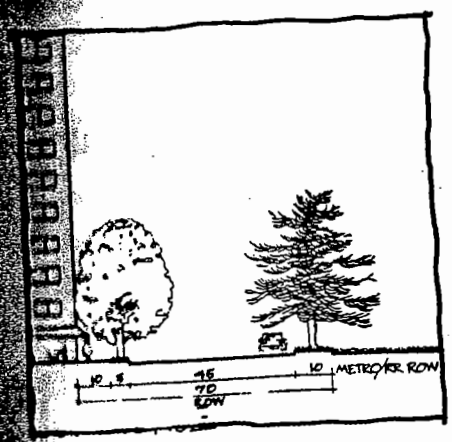
PARKING LOT INTERIORS

Deciduous trees should be used in parking lots to relieve the monotony of large paved masses. Trees planted approximately 30' apart in continuous beds of ground cover provide an overhead canopy and define the space by directing the line of pedestrian and vehicular movement. Walkways should be separated from vehicular traffic by elevation, landscaping or surface treatments such as brick pavers, flagstone, or other safe and attractive materials.

TWINBROOK URBAN DESIGN GUIDELINES

LANDSCAPE SCREENING OF NON-SIMILAR USES

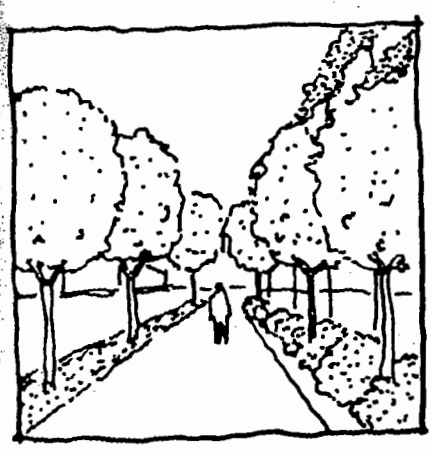
Plant a continuous row of coniferous (evergreen) trees between non-similar uses. The landscape buffer provides a transition between different zones, creates privacy, screens unsightly areas and defines special areas. Trees at the time of planting shall be a minimum of 15' high with at least 75% continuous opacity, planted in a diagonal grid.



NON-SIMILAR USES

All developments in the Twinbrook Metro Area shall provide screening between non-similar uses as shown in the Functional Plans and Sections. These include:

- residential/retail
- residential/office
- residential/major road
- Metro tracks/any use
- as otherwise indicated on Functional Plans and Sections

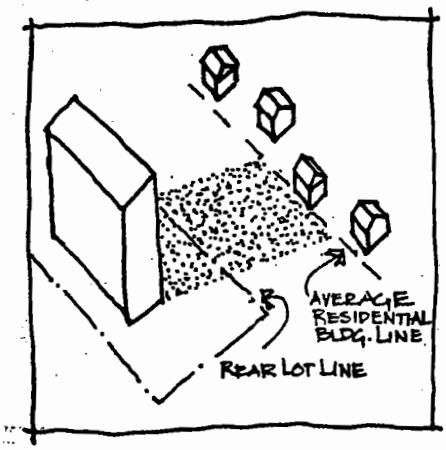


SCREEN RETAINING WALLS & FENCES

Plant a continuous landscape screen in front of retaining walls and fences to soften the mass and hard edges. Provide 75% opacity in a continuous row or staggered planting.

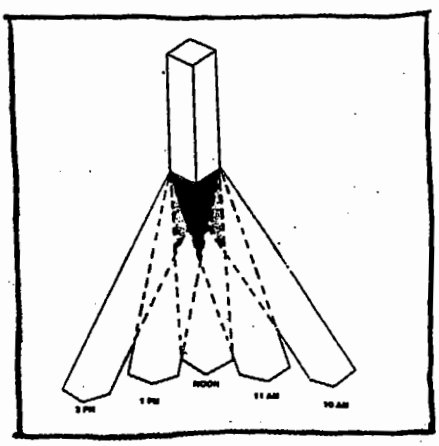
TWINBROOK URBAN DESIGN GUIDELINES
SOLAR ACCESS REQUIREMENTS

In order to minimize the impact of tall buildings on residential structures, no buildings may cast a shadow on adjacent residential structures between 10 a.m. and 2 p.m. as calculated for December 21. The shadows produced on December 21 are the longest of the year and compliance will result in lesser impacts during the remainder of the year.



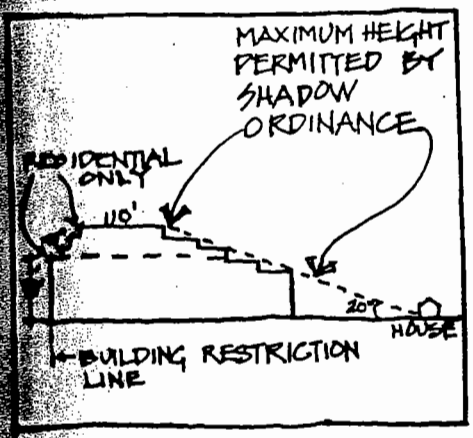
SHADOW STUDY

A shadow study is performed for developments that may cast shadows on residential structures. The shadow study follows the technique recommended for solar path diagrams in Architectural Graphics Standards, 7th Edition. This study should indicate the area where shadows will fall between 10 a.m. and 2 p.m. on December 21.



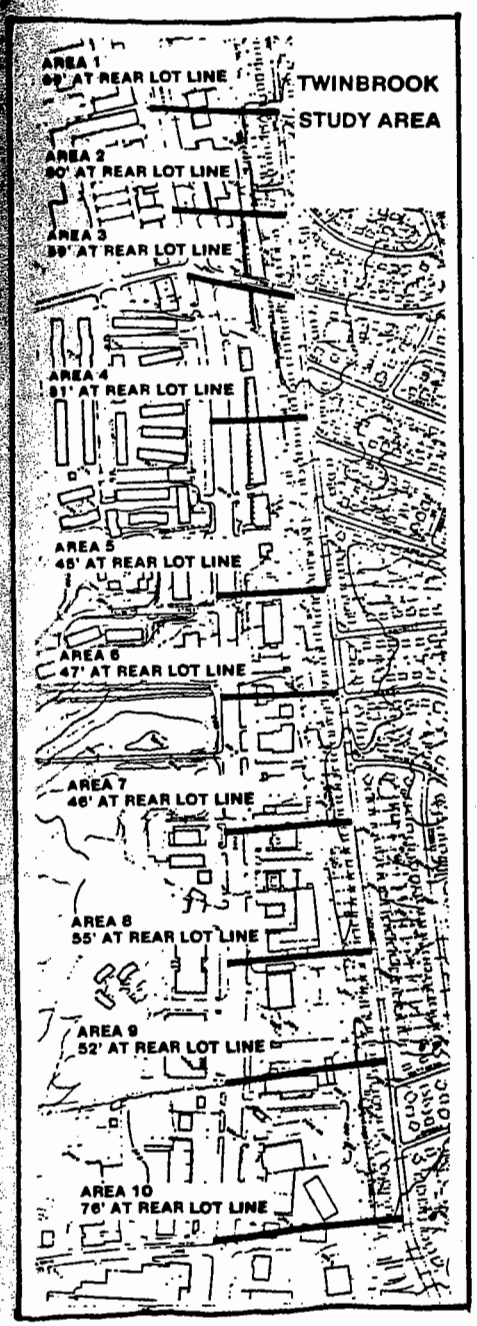
RESIDENTIAL TOWERS

Widely spaced towers are exempt from the solar access regulation. This is due to the small footprint of a tower that results in a thinner shadow which moves across the property quickly, much like a sundial. A residential tower is considered to be a building where the width is not more than 10% greater than the depth or vice versa. The separation between two towers must be at least equal to the height of the taller structure for them to be "widely spaced."



GENERAL APPLICATION

The accompanying sketches illustrate the general application of the Solar Access Requirement. The drawing to the left illustrates the maximum height permitted by the shadow ordinance; this approximates a 20° angle originating from the average residential building line. Compliance with the ordinance impacts the design of tall buildings, especially in light of the building envelope step-back required by the 45° layback plane along Rockville Pike.



TWINBROOK CASE STUDY

The Twinbrook neighborhood was selected to test the effect of the Solar Access Requirements. Ten areas were designated for study and the average distance of the area's houses from the rear lot line of adjacent commercial properties was determined. A solar path diagram for 40° N. latitude was utilized for the study. Rockville lies at 39'15", which results in shorter shadows. In practice, the individual shadow studies will produce greater accuracy.